SHARP SERVICE MANUAL

No. S88N6LC37D44E

LCD COLOUR TELEVISION

MODELS LC-37D44E/S/RU-BK/GY

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

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Parts Guide

Parts marked with " ⚠ " are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

SAFETY PRECAUTION

IMPORTANT SERVICE SAFETY PRECAUTION

■ **Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the** servicing guidelines which follow:

■ WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.

CAUTION: FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE REPLACE ONLY WITH SAME TYPE FUSE.

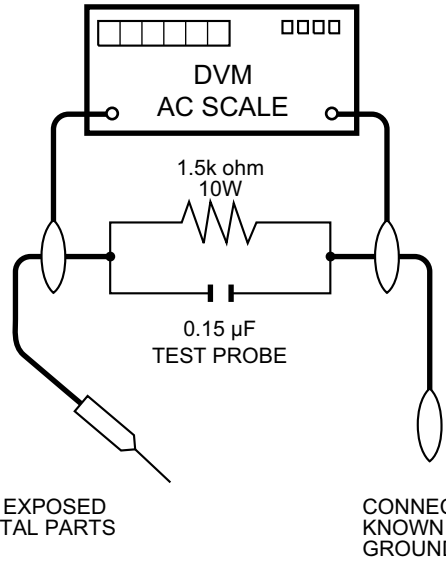
F7101, F7103 (250V 3.15A)
F7102 (250V 1A)

■ BEFORE RETURNING THE RECEIVER (Fire & Shock Hazard)

Before returning the receiver to the user, perform the following safety checks:

3. Inspect all lead dress to make certain that leads are not pinched, and check that hardware is not lodged between the chassis and other metal parts in the receiver.
4. Inspect all protective devices such as non-metallic control knobs, insulation materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
5. To be sure that no shock hazard exists, check for leakage current in the following manner.

- Plug the AC cord directly into a 220~240 volt AC outlet.
- Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15μF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to an earth ground.
- Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity or measure the AC voltage drop across the resistor.
- Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.
  All checks must be repeated with the AC cord plug connection reversed. (If necessary, a nonpolarized adaptor plug must be used only for the purpose of completing these checks.)
  Any reading of 1.05 V peak (this corresponds to 0.7 mA peak AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the monitor to the owner.



SAFETY NOTICE

Many electrical and mechanical parts in LCD color television have special safety-related characteristics.

These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.

Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠" and shaded areas in the Replacement Parts List and Schematic Diagrams.

For continued protection, replacement parts must be identical to those used in the original circuit.

The use of a substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire or other hazards.

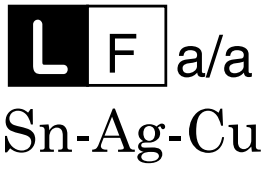
PRECAUTIONS FOR USING LEAD-FREE SOLDER

■Employing lead-free solder

- “PWBs” of this model employs lead-free solder. The LF symbol indicates lead-free solder, and is attached on the PWBs and service manuals. The alphabetical character following LF shows the type of lead-free solder.

  Example:

Indicates lead-free solder of tin, silver and copper.



Indicates lead-free solder of tin, silver and copper.

■Using lead-free wire solder

- When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.

  As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40 °C, we recommend you to use a dedicated soldering bit, if you are not familiar with how to obtain lead-free wire solder or soldering bit, contact our service station or service branch in your area.

■Soldering

- As the melting point of lead-free solder (Sn-Ag-Cu) is about 220 °C which is higher than the conventional lead solder by 40 °C, and as it has poor solder wettability, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, Since the land may be peeled off or the maximum heat-resistance temperature of parts may be exceeded, remove the bit from the PWB as soon as you confirm the steady soldering condition.

  Lead-free solder contains more tin, and the end of the soldering bit may be easily corroded. Make sure to turn on and off the power of the bit as required.

  If a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder. Clean the bit after every use of it.

  When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.

- Be careful when replacing parts with polarity indication on the PWB silk.

Lead-free wire solder for servicing

PARTS CODE	PRICE RANK	PART DELIVERY	DESCRIPTION
ZHNDAi123250E	BL	J	ϕ0.3mm 250g (1roll)
ZHNDAi126500E	BK	J	ϕ0.6mm 500g (1roll)
ZHNDAi12801KE	BM	J	ϕ1.0mm 1kg (1roll)

CHAPTER 1. SPECIFICATIONS

[1] SPECIFICATIONS

Item			37" LCD COLOUR TV, Model: LC-37D44E, LC-37D44S, LC-37D44RU
LCD panel			37" Advanced Super View & BLACK TFT LCD
Resolution			1,049,088 pixels (1,366 x 768)
Video Colour System			PAL/SECAM/NTSC 3.58/NTSC 4.43/PAL 60
TV Function	TV-Standard	Analogue	CCIR (B/G, I, D/K, L,L')
		Digital	DVB-T (2K/8K OFDM)
	Receiving Channel	VHF/UHF	E2–E69ch, F2–F10ch, I21–I69ch, IR A–IR Jch, (Digital: E5–E69ch)
		CATV	Hyper-band, S1–S41ch
	TV-Tuning System		Auto Preset 999 ch: non-Nordic / 9999 ch: Nordic (ATV: 99 ch), Auto Label, Auto Sort
	STEREO/BILINGUAL		NICAM/A2
Brightness			450 cd/m^2 (in Dynamic Mode)
Viewing angles			H : 176° V : 176°
Audio amplifier			10W x 2
Speaker			(145 mm x 35 mm) x 2
Terminals	Antenna		UHF/VHF 75 Ω Din type (Analogue & Digital)
	RS-232C		9 pin mini D-sub
	EXT 1		SCART (AV input, Y/C input, RGB input, TV output)
	EXT 2		SCART (AV input/output, Y/C input, RGB input, AV Link)
	EXT 3		S-VIDEO (Y/C input), RCA pin (AV input)
	EXT 4		Ø 3.5 mm jack (Audio input), 15 pin mini D-sub (PC)
	EXT 5		Audio in, Component in
	EXT 6		HDMI, Ø 3.5 mm jack (Audio input)
	EXT 7		HDMI
	C. I. (Common Interface)		EN50221, R206001
	OUTPUT		RCA pin (Audio)
	Headphones		Ø 3.5 mm jack (Audio output)
Power Requirement			AC 220–240V, 50 Hz
Power Consumption			146 W (0.9 W Standby) (Method IEC60107)
Weight			14.5 kg (Display only), 17.0 kg (Display with stand)
Operating temperature			0°C to + 40°C

- As a part of policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

NOTE
- Refer to inside back cover for dimensional drawings.

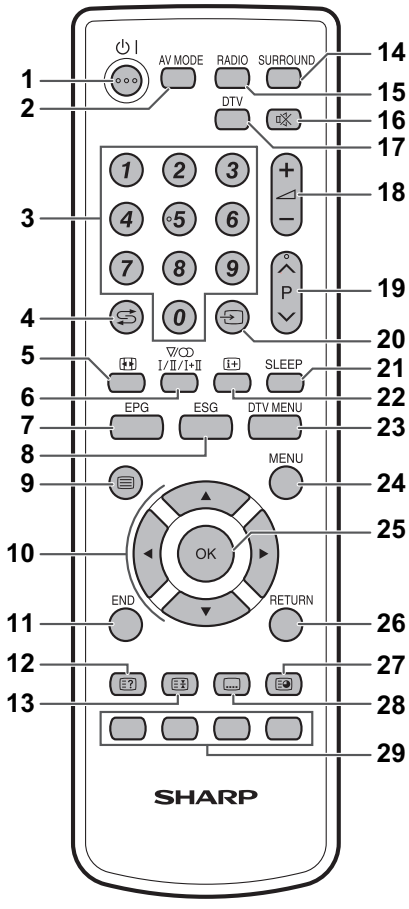
Optional accessory

The listed optional accessories are available for the LCD colour TV. Please purchase them at your nearest shop.
- Additional optional accessories may be available in near future. When purchasing, please read the newest catalogue for compatibility and check the availability.

Part name	Part number
Wall mount bracket (LC-37D44E, LC-37D44S, LC-37D44RU)	AN-37AG5

[2] OPERATION MANUAL

Remote control unit



1 ⏻ **(Standby/On)**
Enter standby mode or turn on the power.

2 **AV MODE**
Select a video setting.

3 **0 – 9**
Set the channel in TV and DTV mode.
Set the page in Teletext mode.

When one of the 4 Nordic countries (Sweden, Norway, Finland or Denmark) is selected in the country setting of Auto Installation, DTV channels are 4 digits. When another country is selected, DTV channels are 3 digits.

4 **(Flashback)**
Press to return to the previous selected channel or external input mode.

5 **(WIDE MODE)**
Select the wide mode.

6 **(Sound mode)**
Select the sound multiplex mode.
(See below.)

7 **EPG**
DTV: To display EPG (Electronic Programme Guide) screen.

8 **ESG**
DTV: To display ESG (Electronic Service Guide) screen.

9 **(Teletext)**
Select the TELETEXT mode.

DTV: Select DTV data broadcasting and TELETEXT.

10 **▲/▼/◄/► (Cursor)**
Select a desired item on the setting screen.

11 **END**
Exit the menu screen.

12 **(Reveal hidden Teletext)**

13 **(Freeze/Hold)**

14 **SURROUND**
Switch the surround effects on and off.

15 **RADIO**
DTV: Switch between RADIO and DTV mode.

16 **(Mute)**
Switch the sound on and off.

17 **DTV**
Press to access DTV mode while watching other input sources, and vice versa.
(This button will not work if you were watching DTV immediately before turning off the TV. In this case first select any other input source except DTV using the ⏎ button.)

18 **(+/−) (Volume)**
(+) Increase the volume.
(−) Decrease the volume.

19 **P (∧ / ∧)**
TV/DTV: Select the channel.
External: Switch to TV or DTV input mode.
Teletext: Move to the next/previous page.

20 **(INPUT SOURCE)**
Select an input source.
(TV, DTV, EXT1, EXT2, EXT3, EXT4, EXT5, EXT6, EXT7)

21 **SLEEP**
Set the sleep timer on (in units of 30 min. up to max. 2 hr. 30 min) and off.

22 **(Display information)**

23 **DTV MENU**
DTV: Display DTV Menu screen.

24 **MENU**
Display the MENU screen.

25 **OK**
Execute a command within the menu screen.
TV/DTV: Display the programme list.

26 **RETURN**
Return to the previous menu screen.

27 **(Subpage)**

28 **(Subtitle for Teletext)**
TV/External: To turn the subtitles on and off.
DTV: Display the subtitle selection screen.

29 **Colour (Red/Green/Yellow/Blue)**
TELETEXT: Select a page.

DTV: The coloured buttons are used to select correspondingly to the coloured items in the menu screen.

● Using ▽/◯ I/II/I+II on the remote control unit

DTV mode:

Press II+I/II/I ◯/△ to open the multi audio screen.

Analogue TV mode:

Each time you press II+I/II/I ◯/△, the mode switches as illustrated in the following tables.

NICAM TV broadcasts selection

Signal	Selectable items
Stereo	NICAM STEREO, MONO
Bilingual	NICAM CH A, NICAM CH B, NICAM CH AB, MONO
Monaural	NICAM MONO, MONO

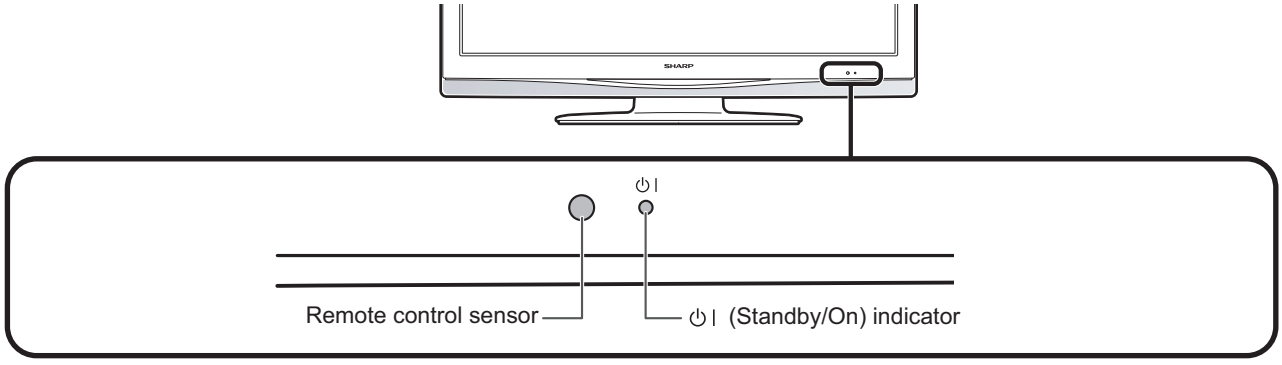
A2 TV broadcasts selection

Signal	Selectable items
Stereo	STEREO, MONO
Bilingual	CH A, CH B, CH AB
Monaural	MONO

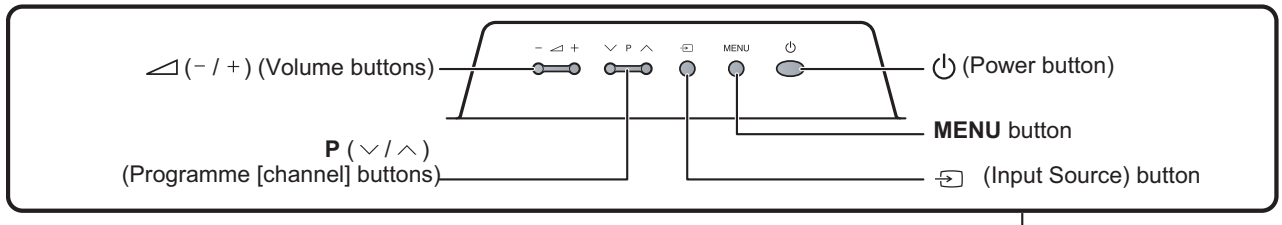
NOTE

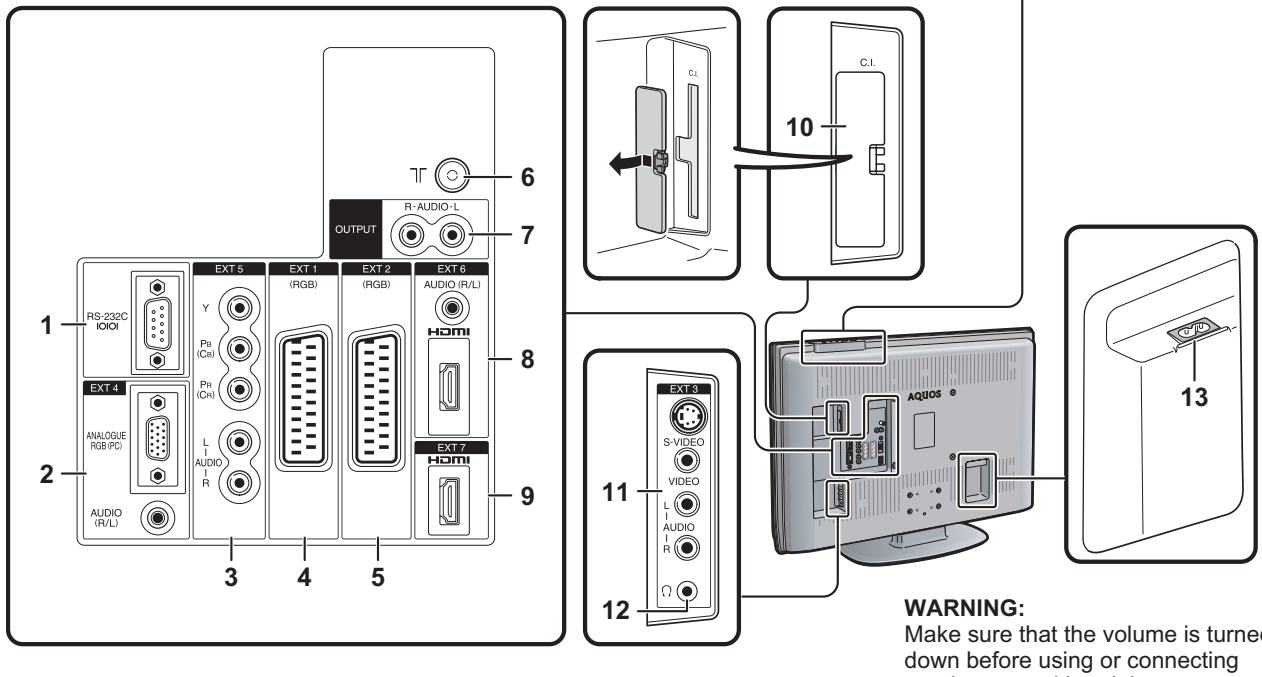
- When no signal is input, the sound mode will display “MONO”.

TV (Front view)



TV (Rear view)





1 RS-232C terminal
2 EXT 4 (ANALOGUE RGB/AUDIO) terminals
3 EXT 5 (COMPONENT) terminals
4 EXT 1 (RGB) terminal
5 EXT 2 (RGB) terminal
6 Antenna input terminal (DVB-T 5V=/80 mA)
7 OUTPUT (AUDIO) terminals
8 EXT 6 (HDMI/AUDIO) terminals
9 EXT 7 (HDMI) terminal
10 COMMON INTERFACE slot
11 EXT 3 terminals
12 Headphone jack
13 AC INPUT terminal

WARNING:
Make sure that the volume is turned down before using or connecting earphones and headphones.
Listen to audio at moderate levels. Excessive sound pressure from earphones and headphones can cause hearing loss.

NOTE
- Only if you use an active terrestrial antenna, select “On (5V)” under “Supply Voltage”.

Troubleshooting

Problem	Possible Solution
• No power.	• Check if you pressed ⏻/I on the remote control unit. If the indicator on the TV lights up red, press ⏻/I. • Is the AC cord disconnected? • Check if you pressed ⏻/I on the TV.
• Unit cannot be operated.	• External influences such as lightning, static electricity, etc., may cause improper operation. In this case, operate the unit after first turning the power off, or unplugging the AC cord and re-plugging it in after 1 or 2 minutes.
• Remote control unit does not operate.	• Are batteries inserted with polarity (+, -) aligned? • Are batteries worn out? (Replace with new batteries.) • Are you using it under strong or fluorescent lighting? • Is a fluorescent light illuminated to remote control sensor?
• Picture is cut off.	• Is the image position correct? • Are screen mode adjustments (4:3 Mode/WSS) such as picture size made correctly?
• Strange colour, light colour, or dark, or colour misalignment.	• Adjust the picture tone. • Is the room too bright? The picture may look dark in a room that is too bright. • Check the colour system setting. • Check the HDMI Setup setting.
• Power is suddenly turned off.	• The unit's internal temperature has increased. Remove any objects blocking vent or clean. • Check the power control setting. • Is sleep timer set? Press **SLEEP** on the remote control unit until it sets to Off.
• No picture.	• Is connection to other components correct? • Is input signal type selected correctly after connection? • Is the correct input source selected? • Is non-compatible signal being input? • Is picture adjustment correct? • Is the antenna connected properly? • Is "On" selected in "Audio Only"?
• No sound.	• Is the volume too low? • Make sure that headphones are not connected. • Check if you pressed 🔇 on the remote control unit.
• The DTV menu screen is displayed in monochrome and hard to select the item.	• Check if "Monochrome" is set to "On". If so, set it to "Off".
• The TV sometimes makes a cracking sound.	• This is not a malfunction. This happens when the cabinet slightly expands and contracts according to change in temperature. This does not affect the TV's performance.

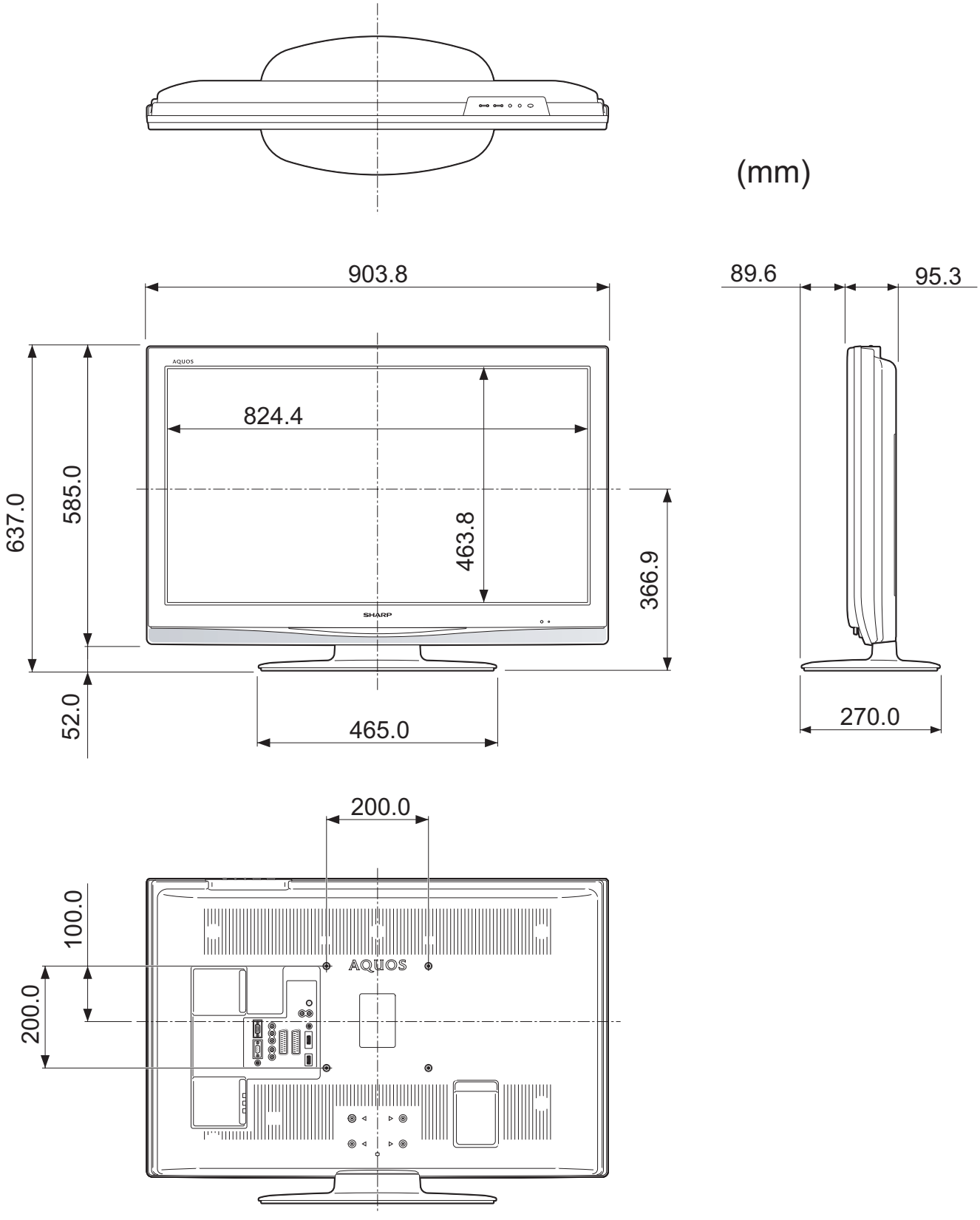
Cautions regarding use in high and low temperature environments

- When the unit is used in a low temperature space (e.g. room, office), the picture may leave trails or appear slightly delayed. This is not a malfunction, and the unit will recover when the temperature returns to normal.
- Do not leave the unit in a hot or cold location. Also, do not leave the unit in a location exposed to direct sunlight or near a heater, as this may cause the cabinet to deform and the LCD panel to malfunction.
  Storage temperature: -20°C to +60°C.

IMPORTANT NOTE ON RESETTING THE PIN

We suggest that you remove the following instruction from the operation manual to prevent children from reading it. As this operation manual is multilingual, we also suggest the same with each language. Keep it in a safe space for future reference.

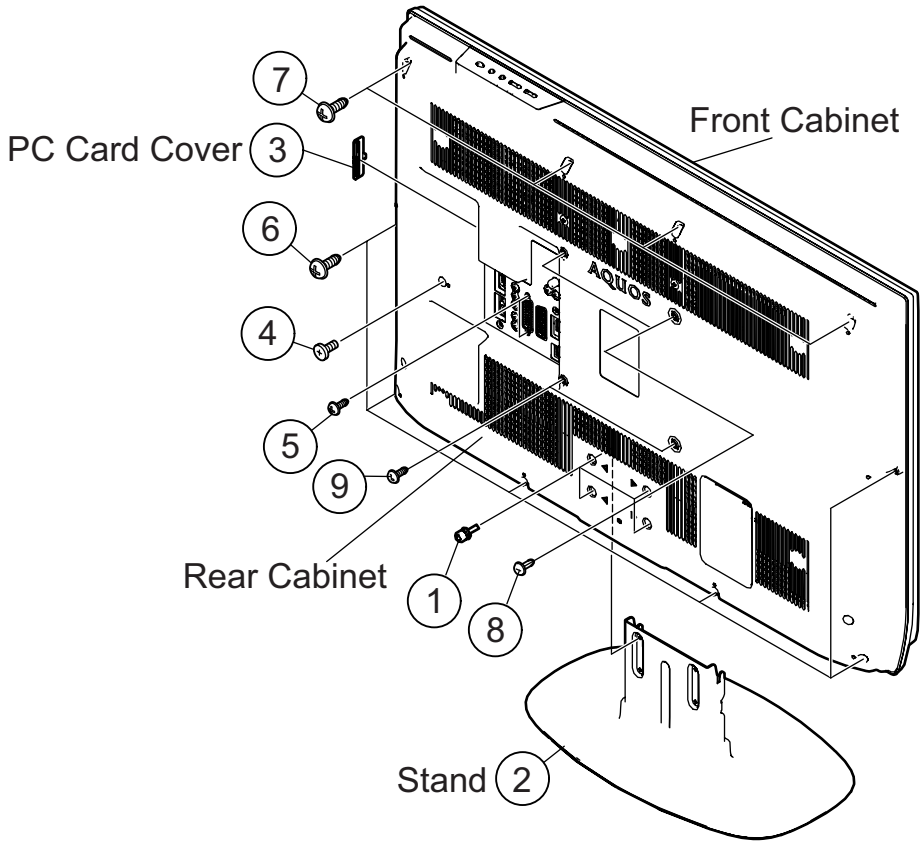
[3] DIMENSIONS



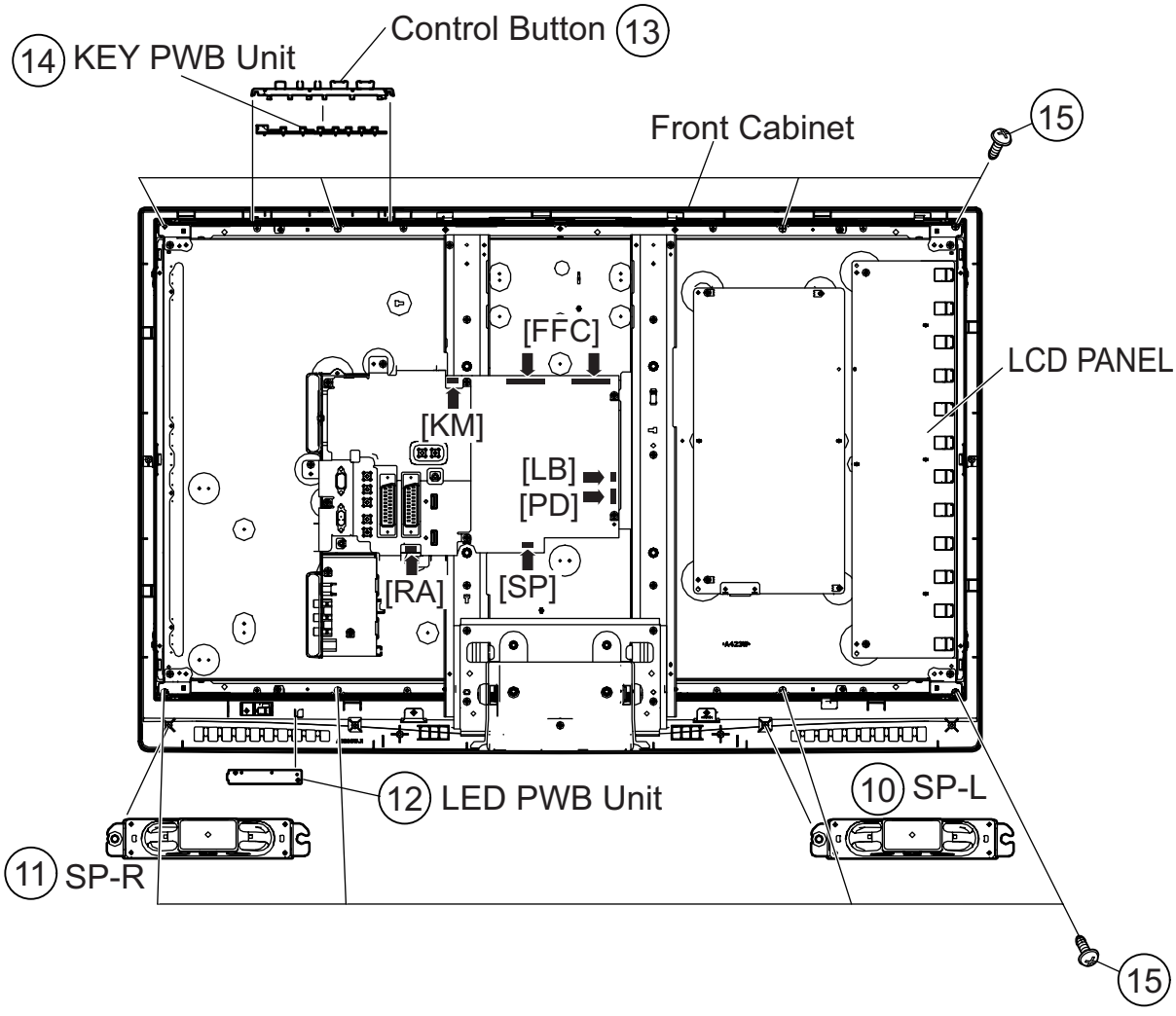
CHAPTER 2. REMOVING OF MAJOR PARTS

[1] REMOVING OF MAJOR PARTS

1. Remove the 4 lock screws ① and detach the Stand ②.
2. Remove the PC Card Cover ③, 1 lock screw ④, 2 lock screws ⑤, 6 lock screws ⑥,4 lock screws ⑦, 2 VESA Caps ⑧ and 2 lock screws ⑨ and detach the Rear Cabinet.



3. Disconnect the KM, LB, PD, SP, RA connectors and FFCs.
4. Remove the Speaker (L) ⑩, Speaker (R) ⑪.
5. Remove the LED PWB Unit ⑫.
6. Remove the Control Button ⑬.
7. Remove the KEY PWB Unit ⑭ from Control Button.
8. Remove the 8 lock screws ⑮ and detach the LCD PANEL from the Front Cabinet.



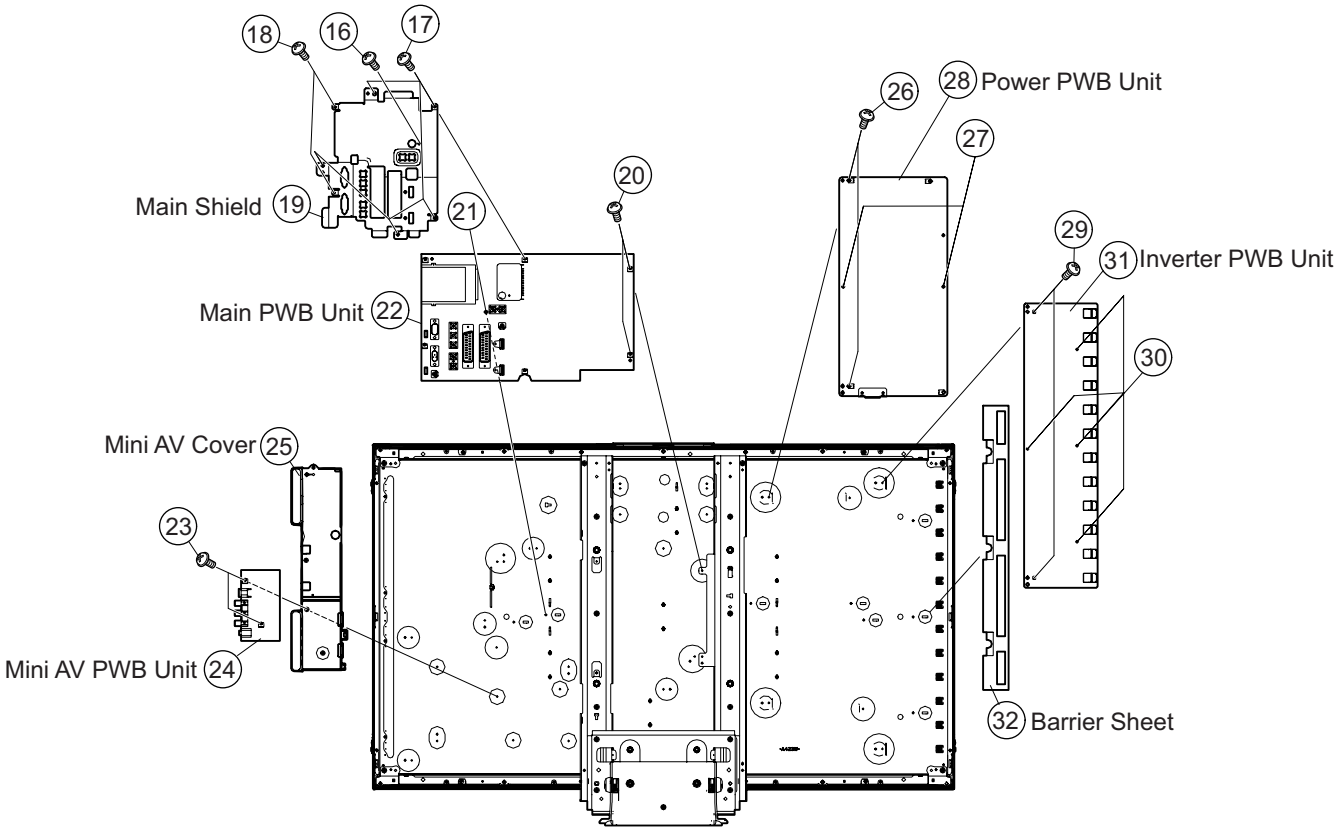
9. Remove the 1 lock screw ⑯, 5 lock screws ⑰, 2 lock screws ⑱ and detach the Main Shield ⑲.

10. Remove the 2 lock screws ⑳ and 1 hook ㉑ and detach the Main PWB Unit ㉒.

11. Remove the 2 lock screws ㉓ and detach the Mini AV PWB Unit ㉔ and Mini AV Cover ㉕.

12. Remove the 2 lock screws ㉖ and 2 hooks ㉗ and detach the Power PWB Unit ㉘.

13. Remove the 2 lock screws ㉙ and 4 hooks ㉚ and detach the Inverter PWB Unit ㉛ and Barrier Sheet ㉜.



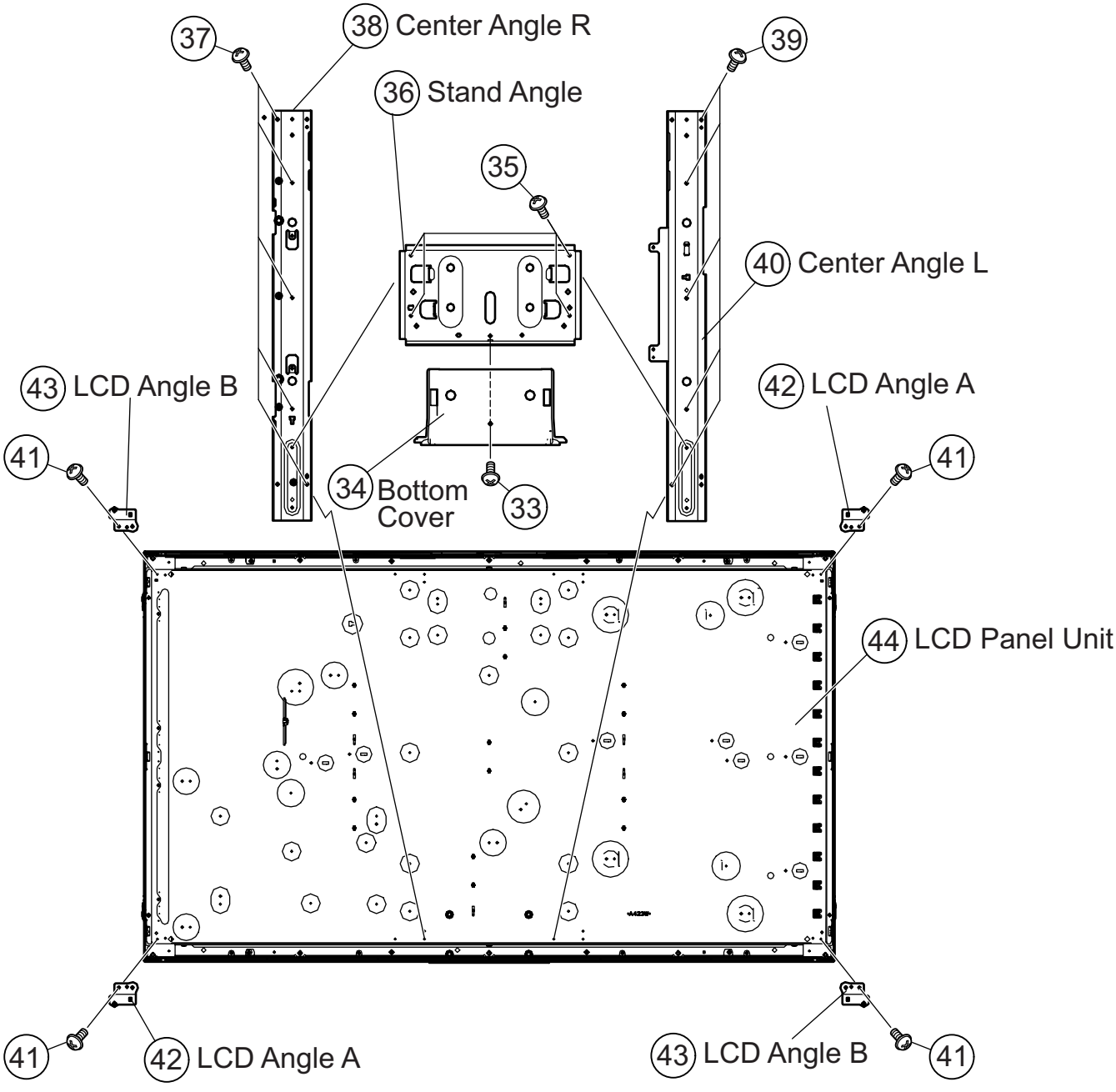
14.Remove the 1 lock screw ㉝ and detach the Bottom Cover ㉞.

15.Remove the 4 lock screws ㉟ and detach the Stand Angle ㊱.

16.Remove the 5 lock screws ㊲ and detach the Center Angle R ㊳.

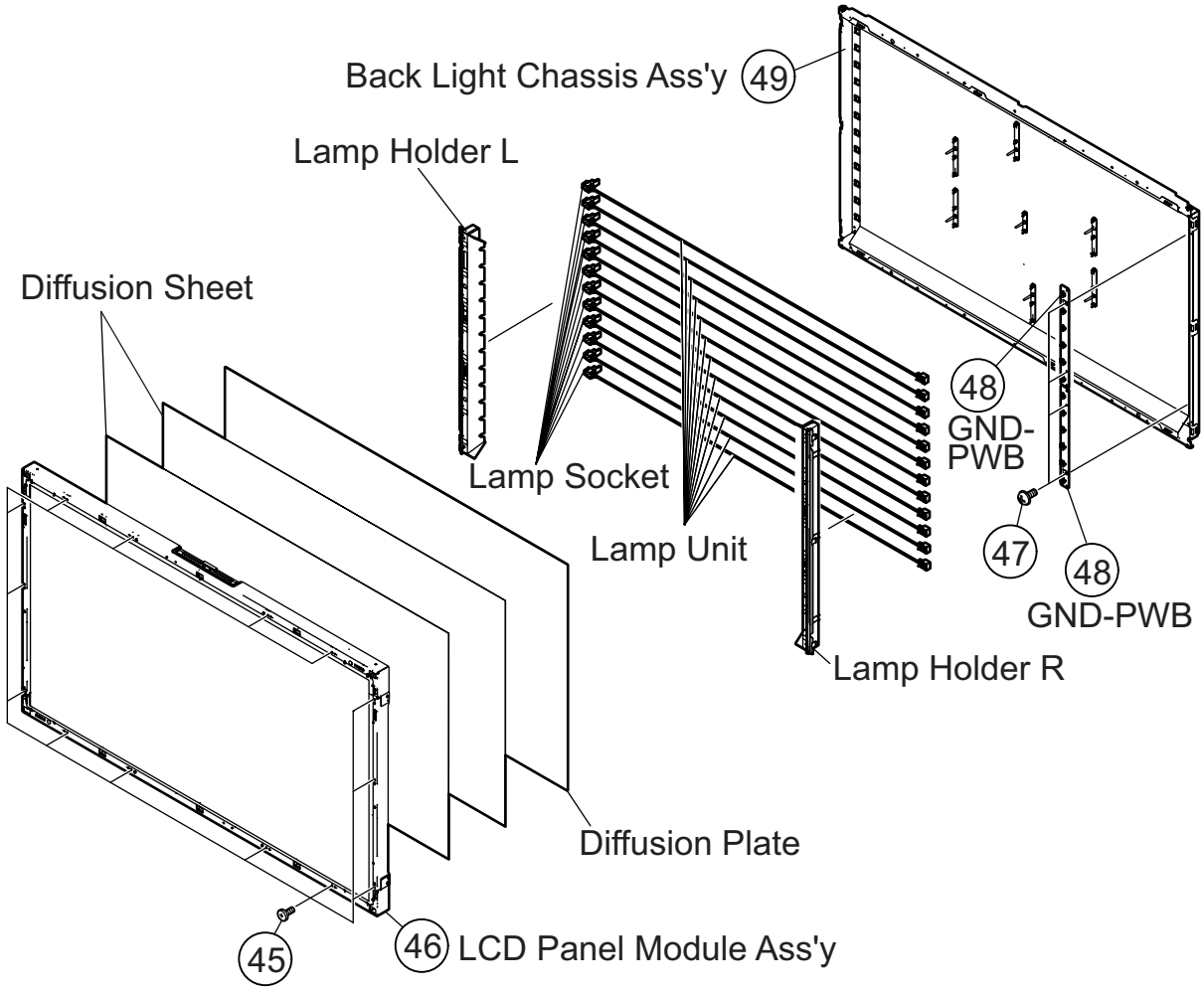
17.Remove the 5 lock screws ㊴ and detach the Center Angle L ㊵.

18.Remove the 4 lock screws ㊶, LCD Angle A ㊷, LCD Angle B ㊸ from the LCD Panel Unit ㊹.



19.Remove the 14 lock screws ㊺ and detach the LCD Panel Module Ass'y ㊻.

20.Remove the 4 lock screws ㊼ and detach the 2 GND-PWB ㊽ from Back Light Chassis Ass'y ㊾.



CHAPTER 3. ADJUSTMENT

[1] After replacement of any PWB and/or IC for repair, note the following.

1. When replacing the following units, be sure to prepare the new units loaded with updated software.

MAIN-UNIT: DUNTKE449FM03

- Note that an IC into which ROM data is written is available for MAIN-UNIT servicing (see below)

IC1902	RH-iXC448WJZZS	EDID (HDMI)
IC1922	RH-iXC447WJZZS	EDID (HDMI)
IC1201	RH-iXC206WJZZS	EDID (PC)
IC8101	RH-iXC564WJZZS	EEPROM

2. After replacing the LCD panel, adjust the VCOM in the following procedure.
   1) Enter the process adjustment mode.
   2) Use the cursor keys ∧ / ∨ and P ∧ / ∨ of R/C to select the item [■ VCOM ADJ] on the page 11/11.
   3) Press the OK key to verify that the adjustment pattern is displayed.
   4) Use the + / - keys of VOL of L/C to adjust the flicker in the center of the screen to minimum.
   5) When the optimal state is achieved in Step 4, press the OK key to turn the pattern to OFF.

[2] SOFTWARE UPDATING

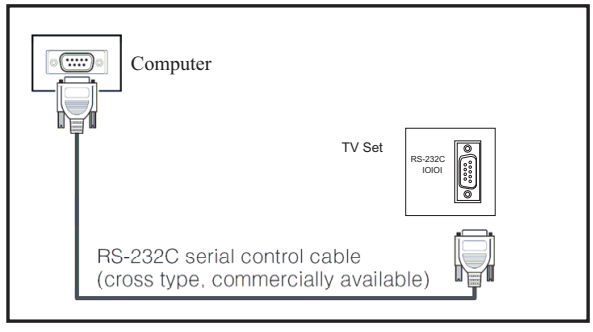
There are 2 methods to update software in the VCTp: I2C method, RS-232C HyperTerminal and RS-232C Tera Term method.

- RS-232C method is allowed when the TV is working properly and the action should be only software upgrade.

1. RS-232C Method Description (HyperTerminal).

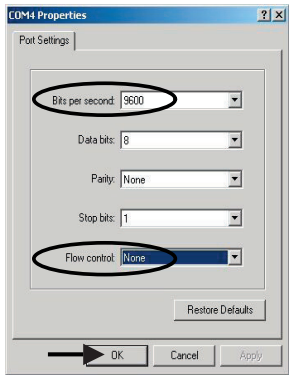
The hardware tools requirement are:

1. A Modem-null (Cross type) DB9 female to DB9 female cable.
2. Make the connections as indicated in the figure:

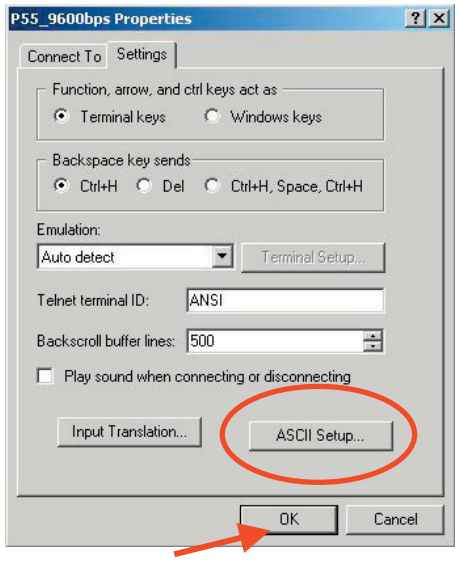


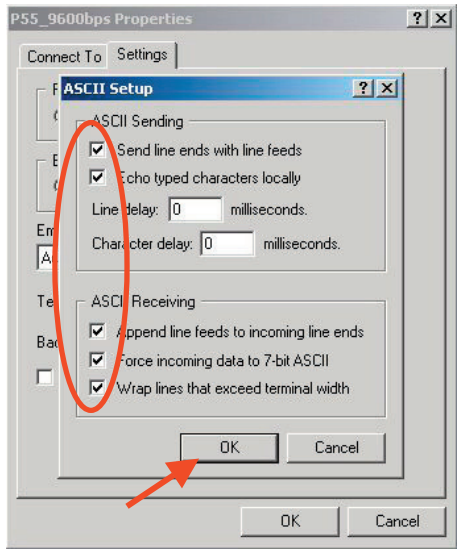
Before using RS-232C updating method is necessary to configure a Terminal PC software. HyperTerminal has been selected as a Terminal software because it's include in all Windows versions as an accessory, and you can find it inside "Accessories\Communications" folder. For this reason, please follow carefully the next steps:

1) First time HyperTerminal is used, it's necessary to configure some settings. Follows next action to configure two connection: low speed (9600bps) and high speed (115200bps).
2) Create a New Connection file with name "P55_9600bps".
3) Select a free COM port and select the Port Settings properties as follows:



4) Click on “File\Properties” menu for selecting the General and ASCII properties as follows:



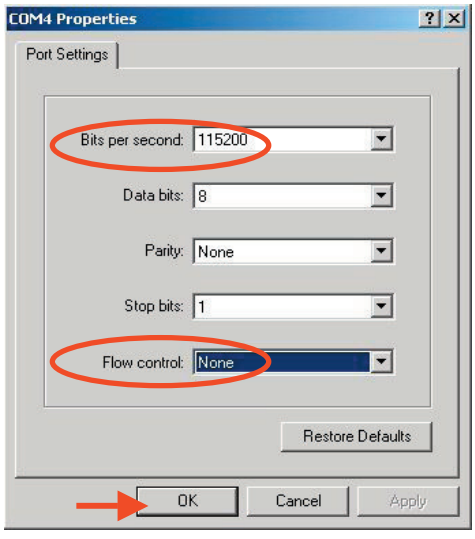


5) Select “New Connection” in the File Menu.

6) Answer “Yes” to close current connection and “Yes” to save session “P55_9600bps”.

7) Create a new connection with the name “P55_115200bps”.

8) Select a the same COM port used in item 2 and select the Port Settings properties as follows:

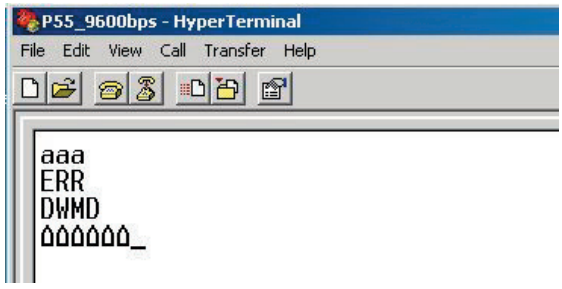


9) Select the same General and ASCII properties as item 3.

10)Close HyperTerminal session, answering “Yes” to close current connection and “Yes” to save session “P55_115200bps”.

To start updating session, click over “P55_9600bps” icon that you can find in the “START\All programs\Accessories\ Communications\HyperTerminal\HyperTerminal” folder and follow next procedure:

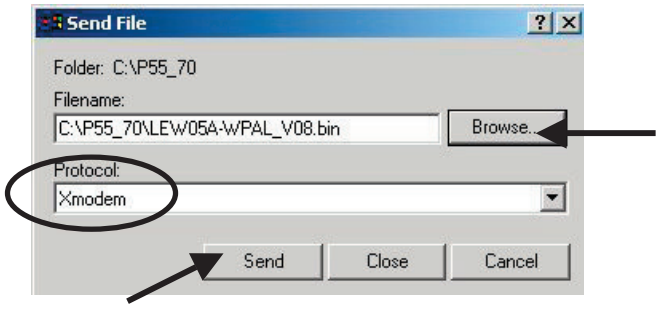
1) Check the connection between TV set and PC, sending a wrong command, as for example: “aaa”. TV set returns an “ERR” label as an syntaxes ERROR (Not correct order or sequence).



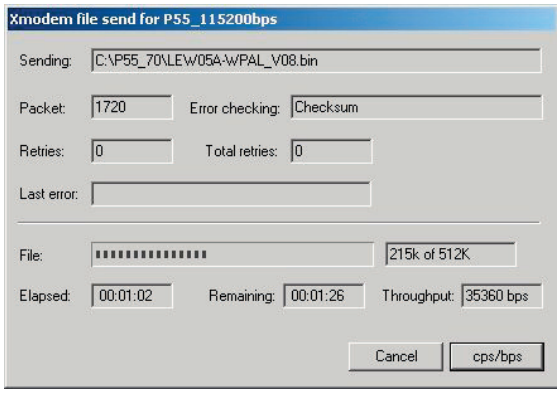
2) Send the command “DWMD” to enter TV set in Download Mode. The TV set answer sending same symbol continuously. If this symbol character doesn’t appear, please don’t worry and pass to next step.

3) Close this connection and open “P55_115200bps” connection clicking over the “P55_115200bps” that you can find in “START\All programs\Accessories\ Communications\HyperTerminal\HyperTerminal” folder.

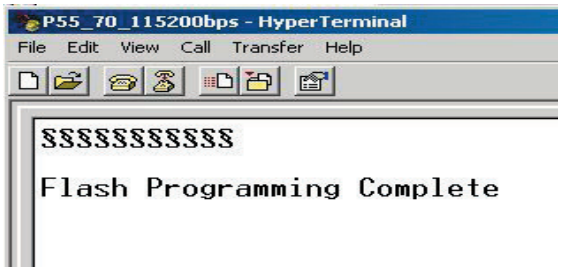
4) Using “Transfer\Send file...” menu, select desired file (.bin format) and the transmission protocol (Xmodem) as show below.



5) After press “Send” button the updating process starts as follows:



6) When flash update process finishes, the “Flash Programming Complete” label appears in the screen, the device automatically go to switch off, and in a few seconds go to switch on again.



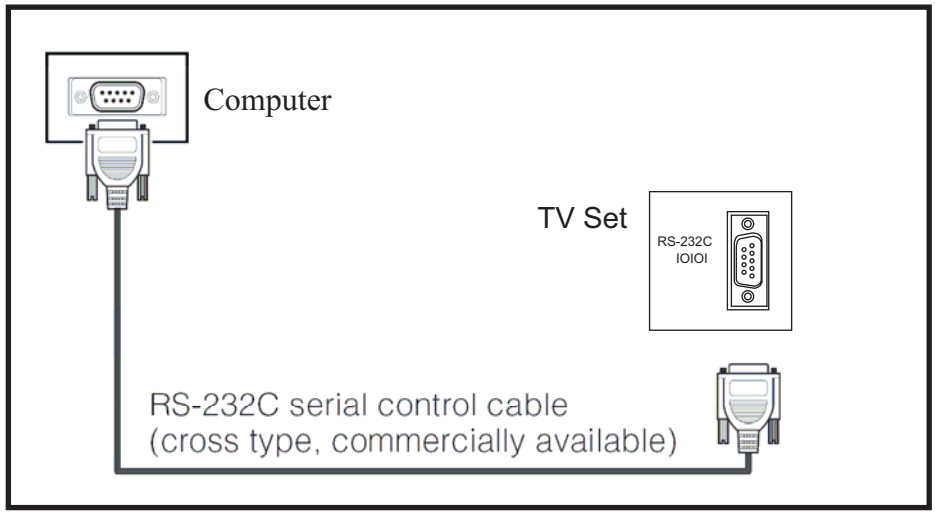
VERY IMPORTANT NOTE:

During the updating time, please don’t use the PC for other purposes, in order to abolish communication problems between TV set and PC. If TV set was not updated properly, the TV won’t have the software to startup again, and you must follow the “I2C method” to update another time the TV set.

2. RS-232C Method Description (Tera Term)

The hardware tools requirement are:

1. A Modem-null (Cross type) DB9 female to DB9 female cable.
2. Make the connections as indicated in the figure:



Software requirements:

To upgrade VCTp software from RS-232C external connector is necessary to use a Tera Term (Pro) free software.

The URL of Tera Term home page is:

http://hp.vector.co.jp/authors/VA002416/teraterm.html

(The address may be changed in future)

Tera Term (Pro) supported operating systems:

MS-Windows 95 or upper

MS-Windows NT 3.5 and 4.0 or upper

Note.- For Windows 3.1 use Tera Term version 1.X.

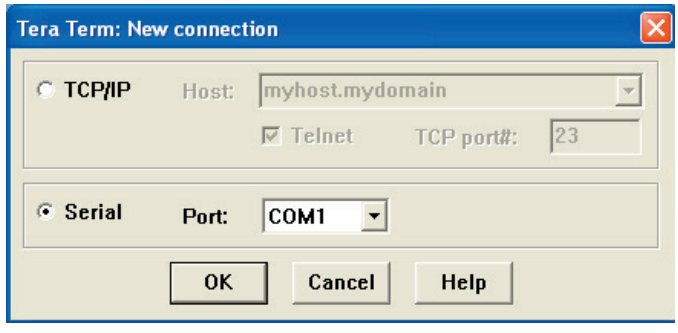
Copy all the distribution files to an empty floppy disk or temporary directory (for example C:\ TEMP).

Run SETUP.EXE and follow the instruction given by it.

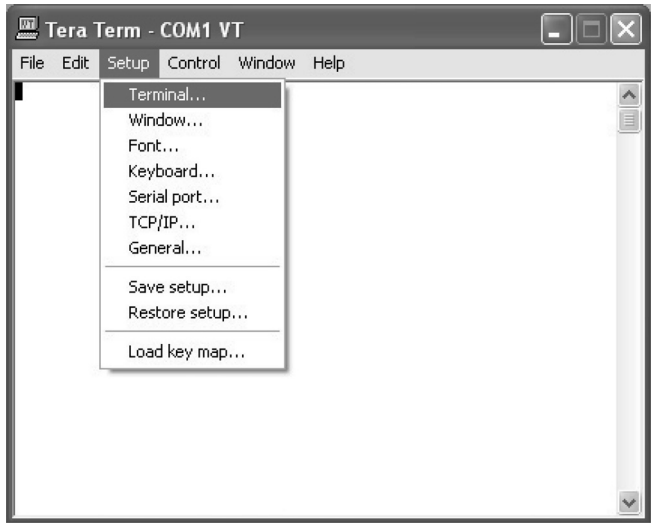
After the installation, the distribution? les are no longer needed, you can delete them or may keep them in the floppy disk.

How to use Tera Term Pro:

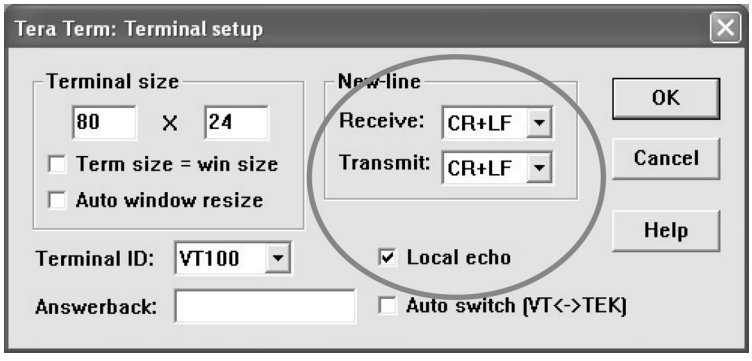
When the Tera Term (Pro) program is used, it's necessary to shape some settings. Follows next action to configure the connection:



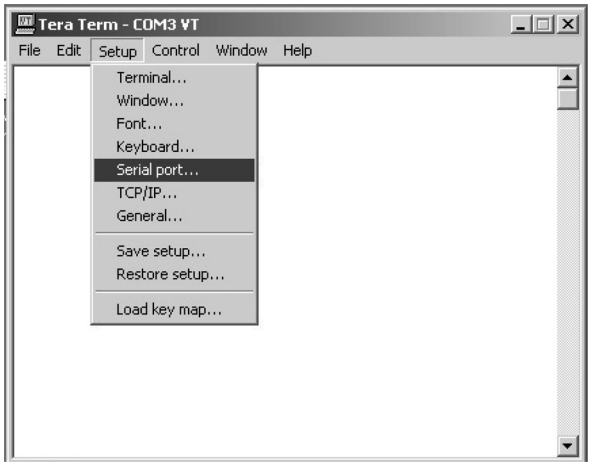
1) Select: **Serial→COM X→ O.K.**



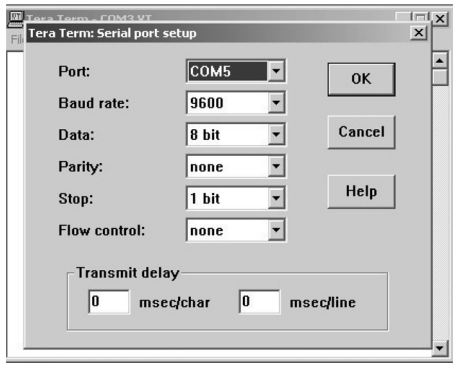
2) Select: **Terminal**



3) Choose the same options as the above picture.



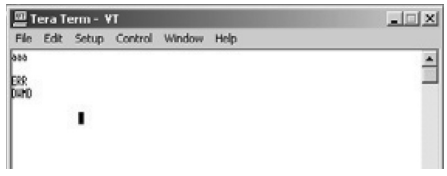
4) Select: **Setup** → **Serial port** → **O.K.** Appear the follow screen:



5) Select follows settings:

Serial port to use:	COM x
Baud rate:	9600
Data:	8 bits
Parity:	none
Stop:	1 bit
Flow control:	none

Enter O.K.

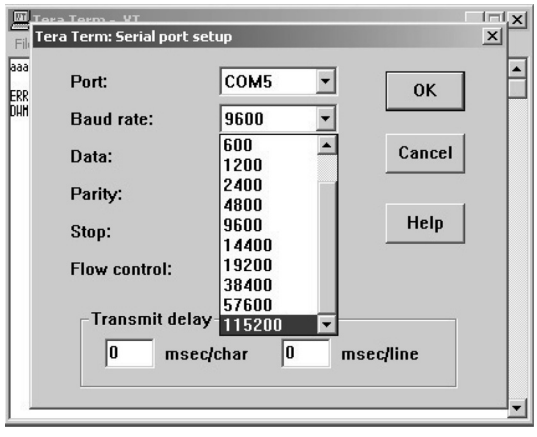


6) Check the connection between TV set and PC, sending a wrong command, as for example: “aaa”. TV set returns an “err” label as an syntaxes ERROR (Not correct order or sequence).

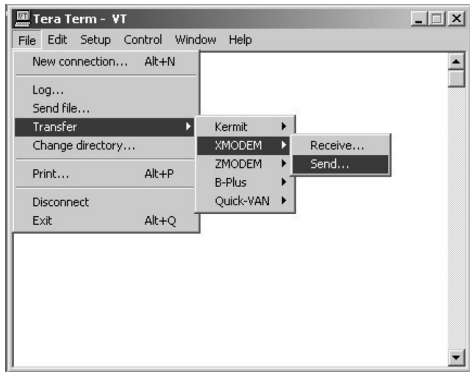
Send a “DWMD” (capital letters) command to enter TV set in Download Mode.

Change a baud rate to 115200.

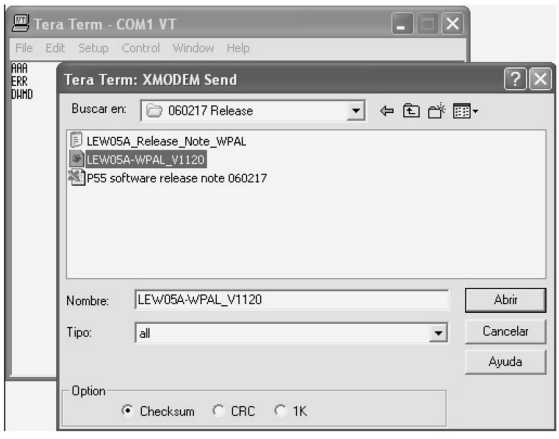
Select: **Setup** → **Baud rate** → **115200** → **O.K.**



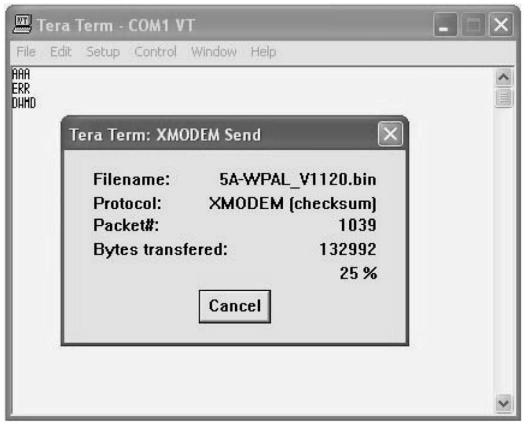
7) Select: **File** → **Transfer** → **XMODEM** → **Sent**



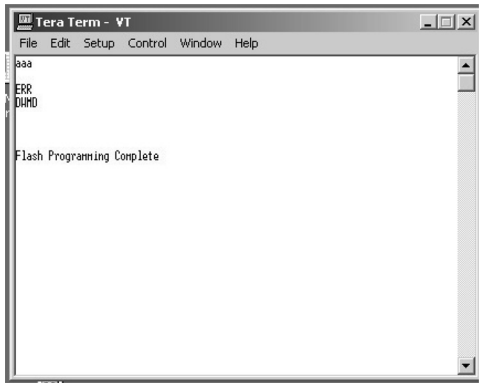
8) Choose the file for upgrade and click “Open”.



9) After select “Open” the upgrade process starts as follows:



10)When flash update process finishes, the “Flash programming complete” label appear in the screen, the device automatically go to switch off, and in a few seconds go to switch on again.



VERY IMPORTANT NOTE:

During the updating time, please don’t use the PC for other purposes, in order to abolish communication problems between TV set and PC. If TV set was not updated properly, the TV won’t have the software to startup again, and you must follow the “I2C method” to update another time the TV set.

3. How to update the Digital Board Software.

There are 2 methods to update the Digital Board Software on Flash Memory (IC4251) thought the Digital Processor (IC4001).

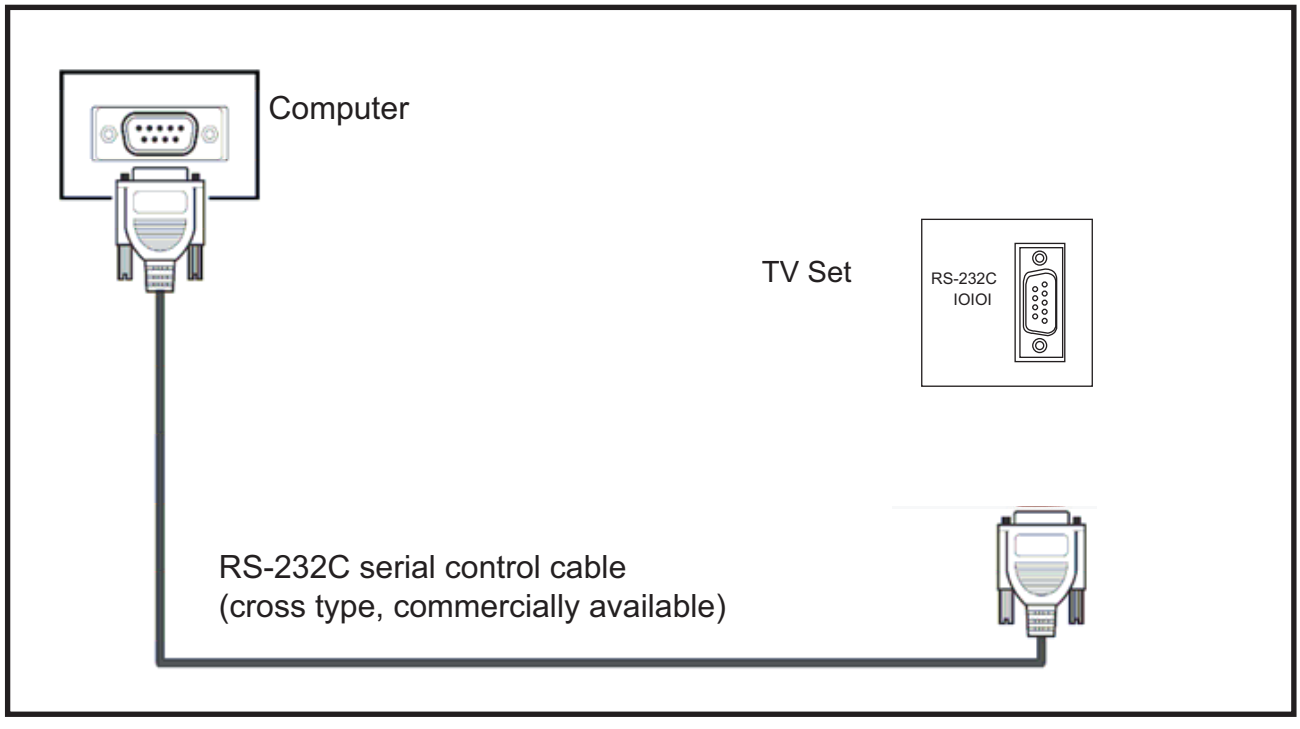
- RS-232 Method (From PC trough RS-232C COM port).
- PCMCIA CARD (Compact Flash Memory) Method.

NOTE: *The PCMCIA method is only compatible with those PCs running XP Windows Version.*

3.1. Jig RS-232 Method Description

- **Hardware requirements:**

1. A modem null (Cross type) DB9 female to DB9 female cable.
2. Make the connections as in the below figure.

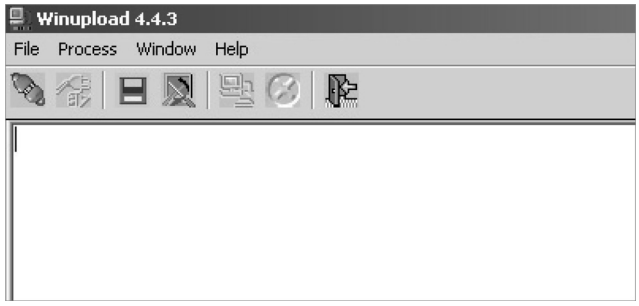


- **Software requirements:**

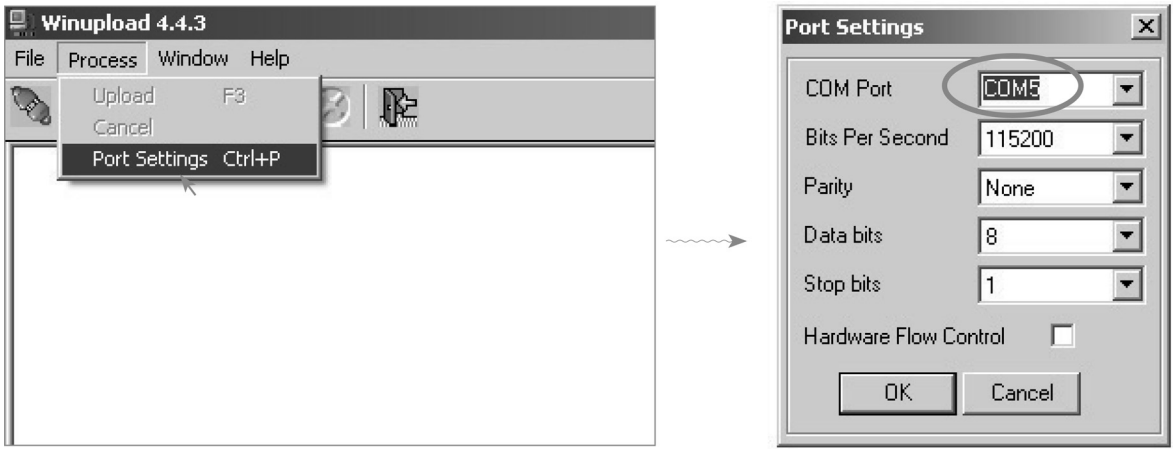
1. “Winupload” application software on PC.

- **How to setup the "Winupload" software for the first time:**

1. Start "Winupload". It will appear the following picture.



2. Select the most suitable RS232 Serial Port from "Port Setting" - "Process" Menu.



3. Select the following settings from "Port Settings" Menu.

Bits Per Second: 115200

Parity: None

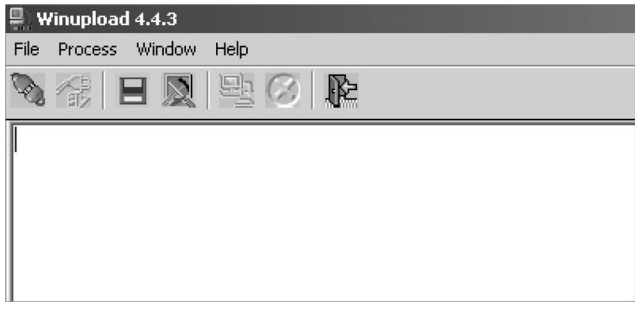
Data bits: 8

Stop bits: 1

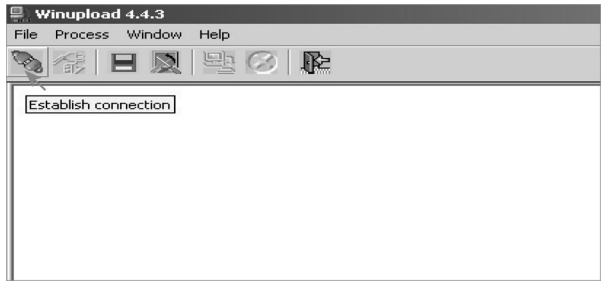
Hardware Flow Control: OFF

- **Procedure for updating the TV set.**

1. Switch off the TV set to be updated, in DTV mode.
2. Start "Winupload". It will appear the following picture on PC.



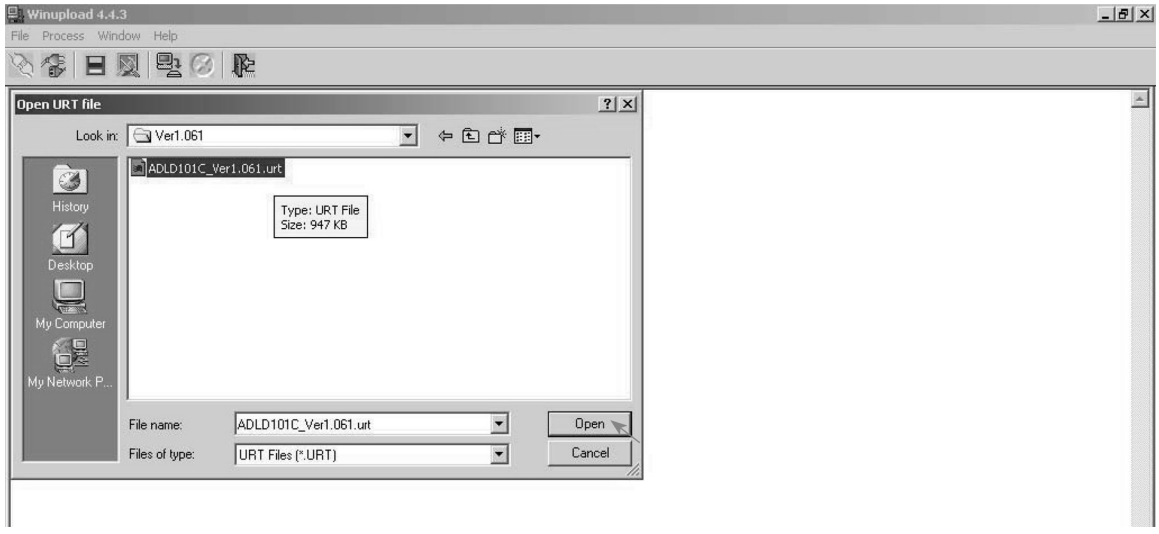
3. Establish connection on Winupload Software.



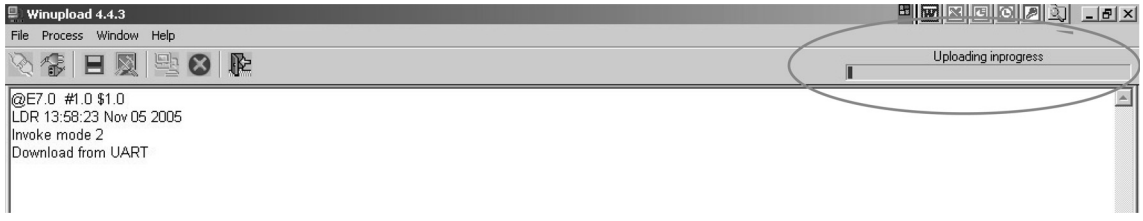
4. Select “Upload URT file”

5. Select and open the “.urt” data file from data directory

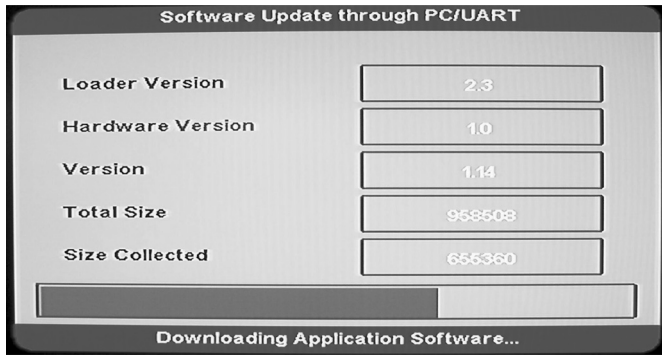
NOTE: Consider the version shown below just an example, may be is not the latest one, and could be different depending on the TV set destination (market/Country) or model.



6. Switch On the TV Set (previously in DTV Mode). The Uploading Process starts automatically.



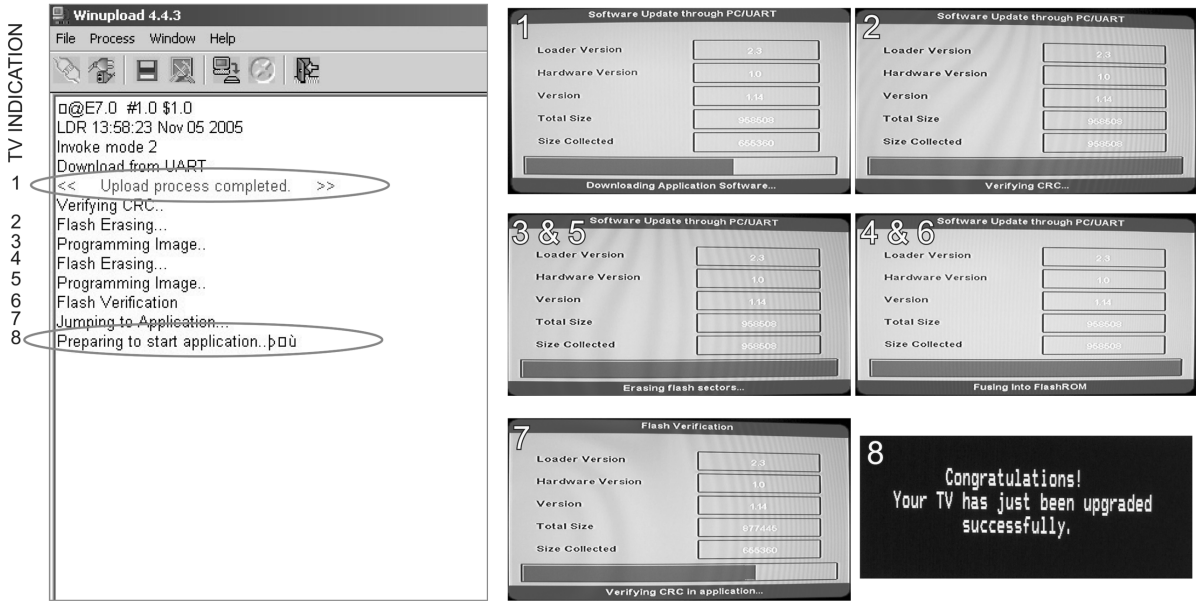
While the TV set is uploading the software, the following information is shown on the TV set screen.



Then, data transfer from PC to TV set finishes when the “Upload progress completed” label appears in the “Winupload” screen. Now, the TV set made some additional verification (Items #2 to #7). When the full uploading process is finished, in the “Winupload” window appears the label “Preparing to start application” for a new TV Set, and just now, in the TV screen of the updated set, appears a congratulations label (Item #8).

PC SCREEN PROGRESS

TV SCREEN PROGRESS



NOTE: *Do not turn off the TV set while the software updating was in progress.*

7. Unplug the AC cord.

8. Disconnect the Jig from TV Set.

- **Software Version verification procedure.**

1. Connect the AC cord and Switch On the TV Set.

2. Select DTV Menu on TV Set. The following On Screen Display will appear.

3. Select “Version”. The updated version can be verified.

NOTE: Consider the version shown above just as example, may be is not the latest one, and could be different depending on the TV set destination (market/Country) or model.

4. Software Version Upgrade Using Card

1. Write the software (ATV and DTV) on the PCMCIA CARD by following the procedure described in the separate document, “How to write software (ATV and DTV) to PCMCIA CARD”.

   (* In the document, both ATV and DTV are written; you may write either of them.)

   (You can equally use any version after “Storage Media Manager Version 1.3.1”.)

2. Turn off the power.

   (* You can select either of the mode ATV or DTV. In this document, ATV is selected.)

3. Insert the PCMCIA CARD with the upper side facing up into the card slot.

   (* Do not insert the card with the upper side facing down.)

4. Turn on the power. After a short time, the message, “SYSTEM SOFTWARE UPDATE IN PROGRESS. ...) appears and the software upgrade starts.

If the ATV software upgrade is necessary, the step proceeds to (5); if unnecessary, the DTV software upgrade starts and the step proceeds to (7).

5. If the ATV software upgrade is necessary, the following display appears and the upgrade starts.

When the status bar reaches 100%, the ATV upgrade is complete. Then the system restarts from the ATV mode. The step proceeds to (6).

6. The message, “SYSTEM SOFTWARE UPDATE IN PROGRESS. ...” appears again and the DTV software upgrade starts. Then the step proceeds to (7).

7. After a short time, the message, “Congratulations! ...” appears. The upgrade is complete.

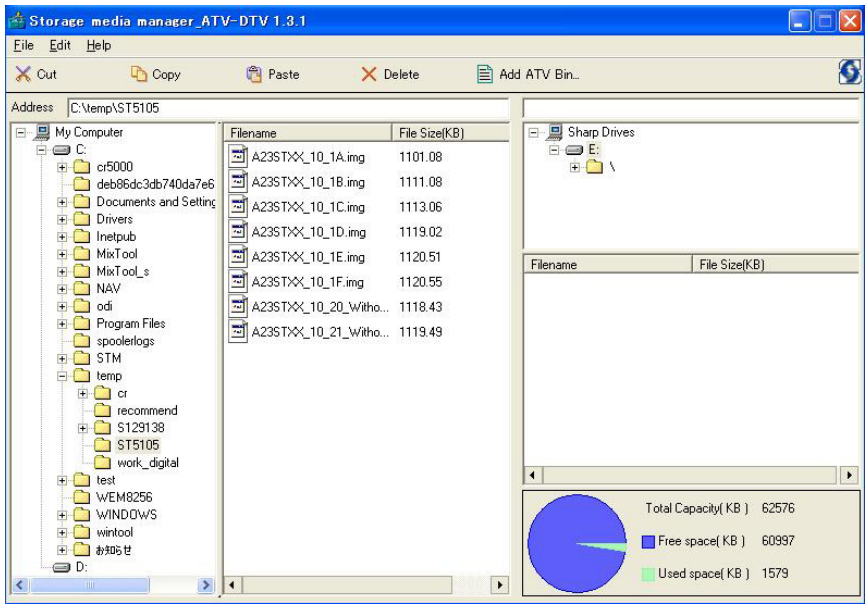
(Note: You cannot downgrade the ATV software but can downgrade the DTV software.)

How to write software(ATV and DTV) to PCMCIA CARD

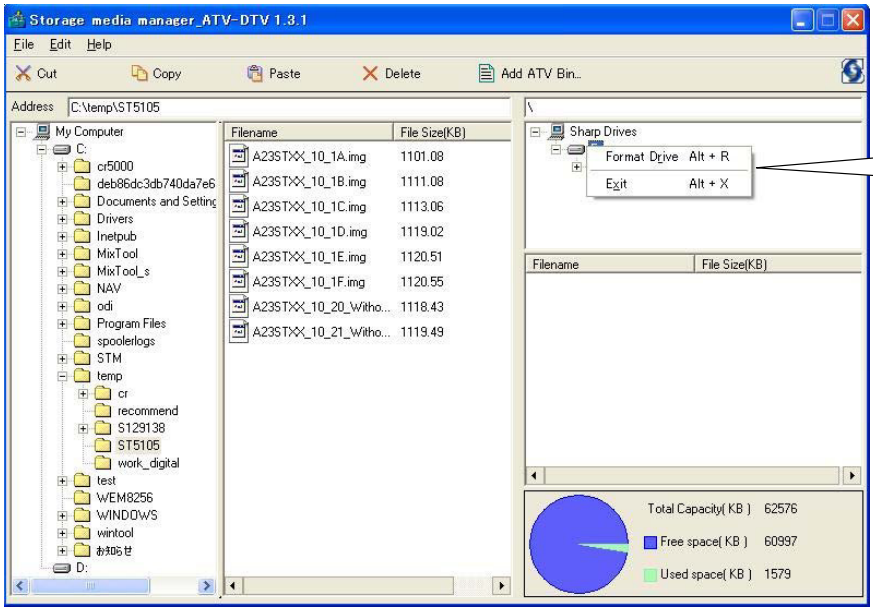
03Dec_2007
Writen by Kentaro Seyama(SHARP Japan)

1.When you write s/w , you should use "StorageMediaManager_ATV-DTV 1.3.1.exe"

2.Start "StorageMediaManager_ATV-DTV 1.3.1.exe".(Displayed as follows.)

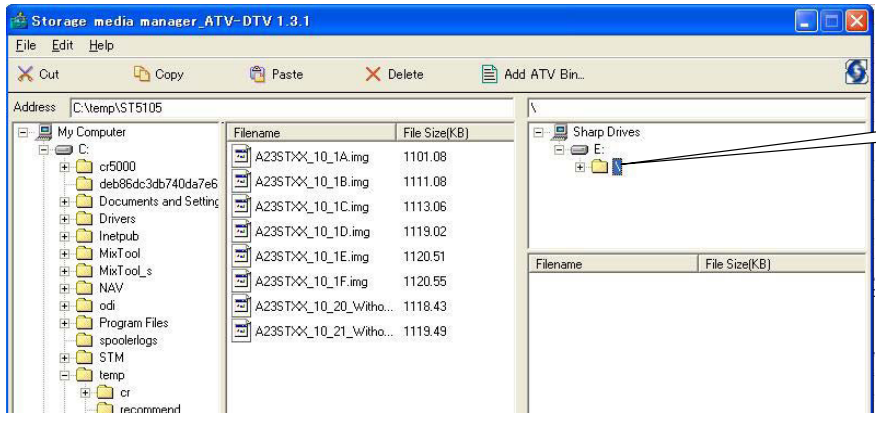


3.Format the Drive

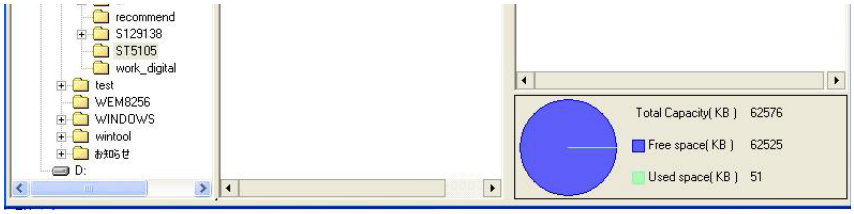


Click the right button at E: drive(The drive that the media for PCMCIA update is inserted in.).
And , choose "Format Drive".

4.Choose folder

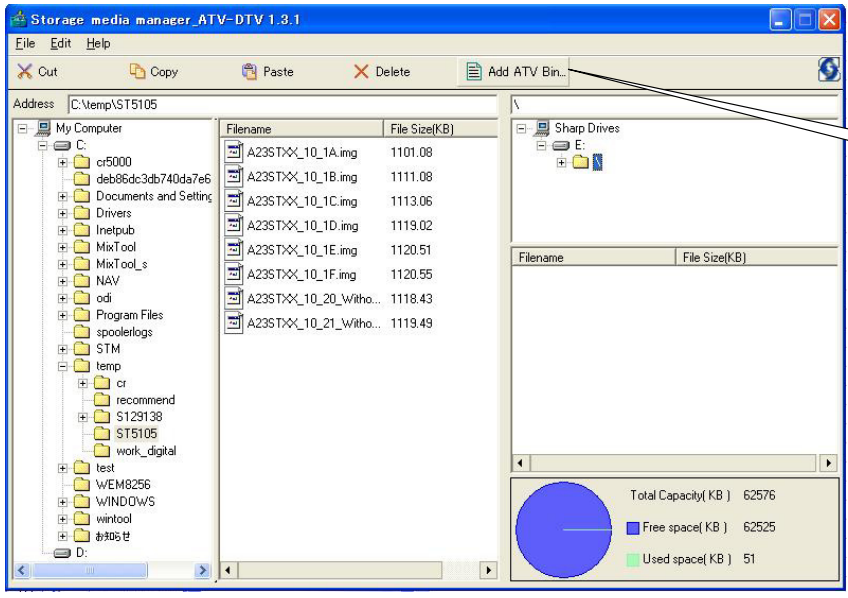


Choose this folder.

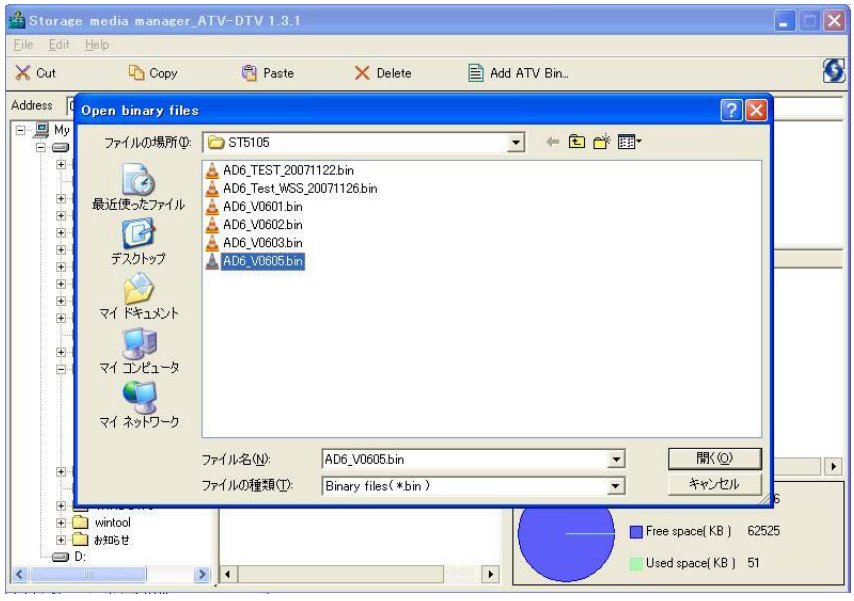


5.Write ATV software

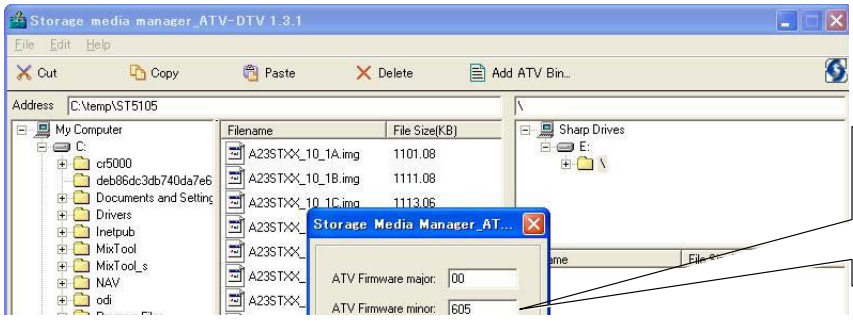
5-1)Choose "Add ATV Bin ..."



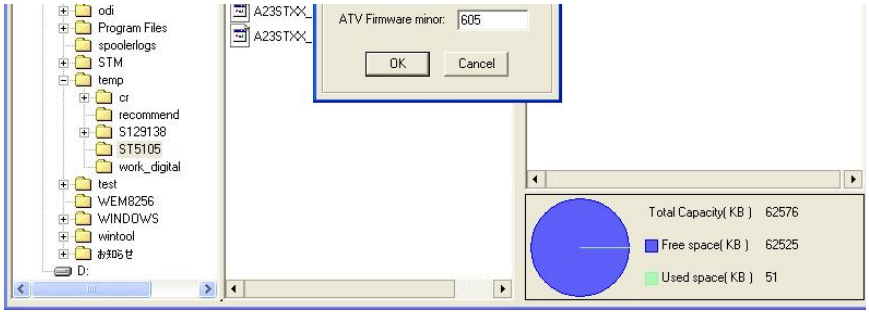
5-2)Select the ATV software.(Sorry for displayed by Japanese.)



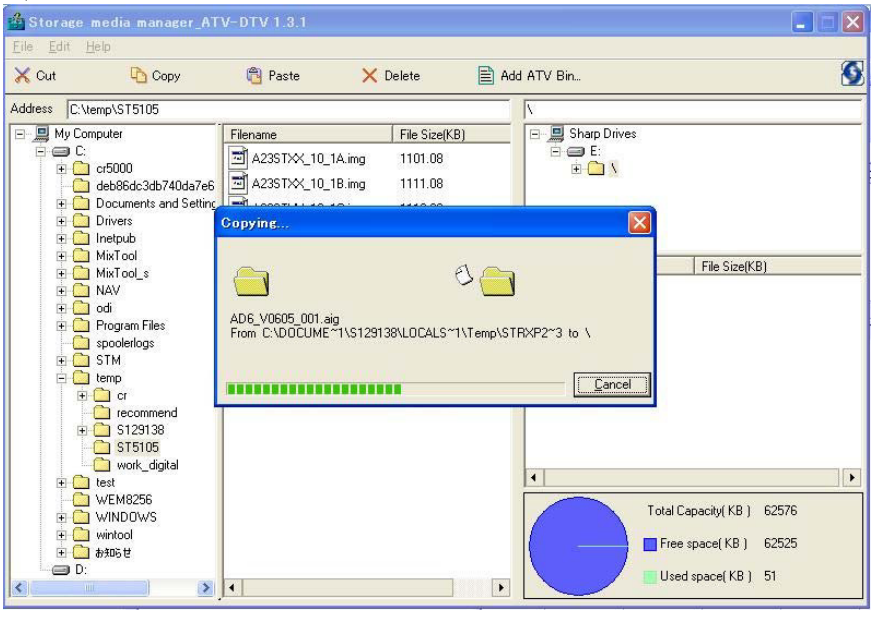
5-3)Input "major code" and "minor code".



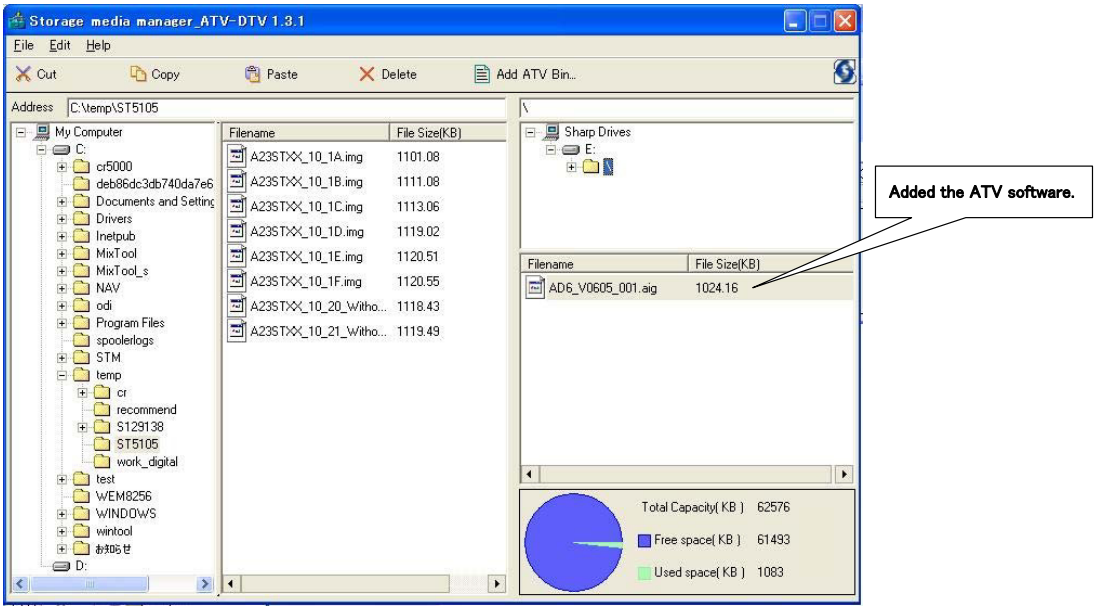
Input the "major code" and "minor" code.
—Ex.—
When you would like to write s/w version "0.605" , you should input as follows.
ATV Firmware major:00
ATV Firmware minor:605
And , press "OK".
———



5-4)Wait for the finish.

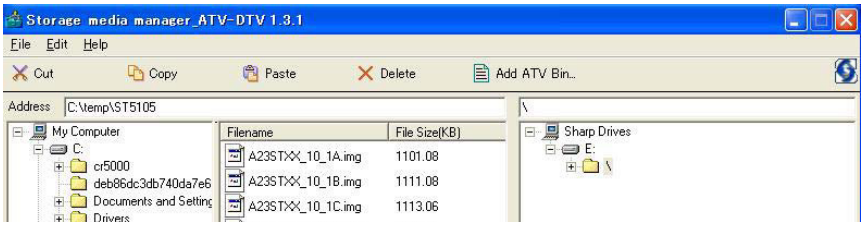


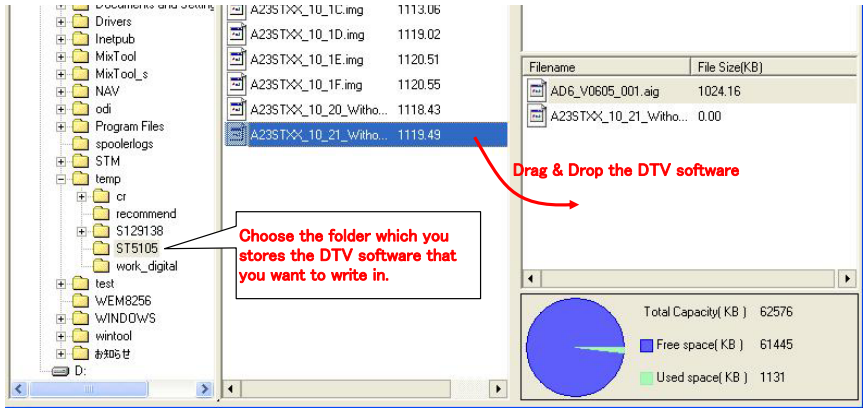
5-5)ATV software writing is succesed.



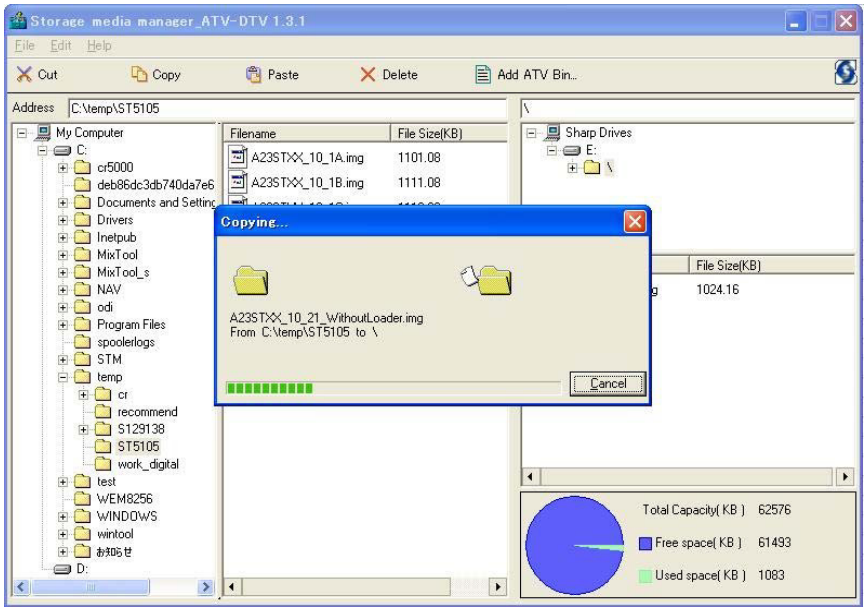
6.Write DTV software

6-1)Choose folder and "drag and drop" the DTV software.

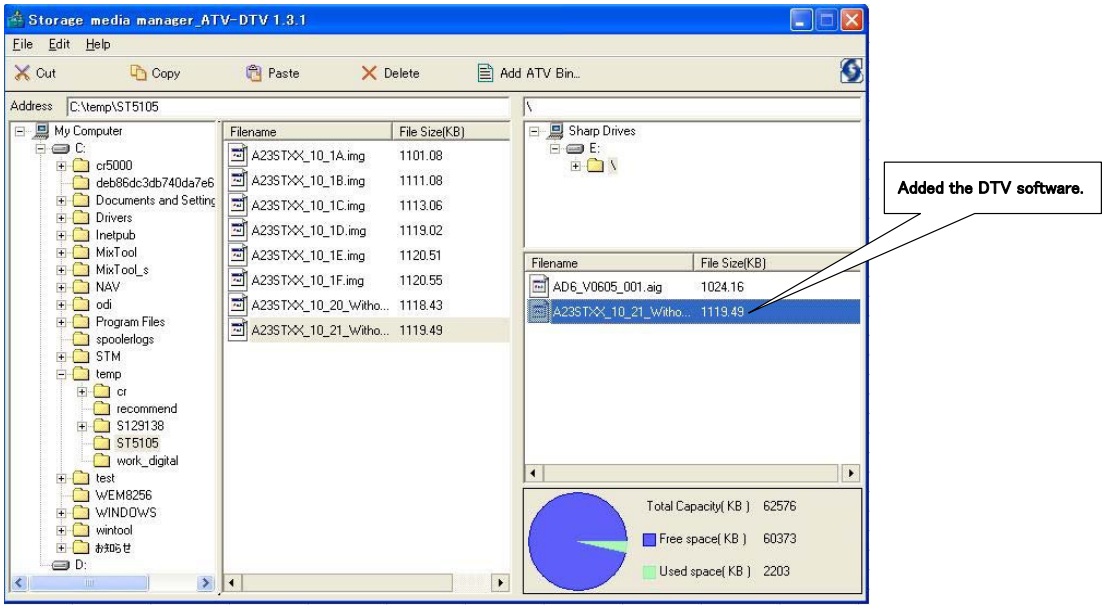




6-2)Wait for the finish.



6-3)DTV software writing is succesed.



7)Choose "File" --> "Exit" (finish the StorageMediaManager_ATV-DTV 1.3.1)

Finish

[3] Entering and exiting the adjustment process mode

1) Unplug the AC power cord of running TV set to force off the power.
2) While holding down the “VOL (-)” and “INPUT” keys on the set at once, plug in the AC power cord to turn on the power.
   The letter appears on the screen.
3) Next, hold down the “VOL (-)” and “P(∨)” keys on the set at once.
   Multiple lines of orange characters appearing on the screen indicate that the set is now in the adjustment Process mode.
   If you fail to enter the adjustment process mode (the display is the same as normal startup), retry the procedure.
4) To exit the adjustment process mode after the adjustment is done, unplug the AC power cord to force off the power. (When the power is turned off with the remote controller, once unplug the AC power cord and plug it in again. In this case, wait 10 seconds or so before plugging.)

Caution: Use due care in handling the information described here lest the users should know how to enter the adjustment process mode. If the settings are tampered with in this mode, unrecoverable system damage may result.

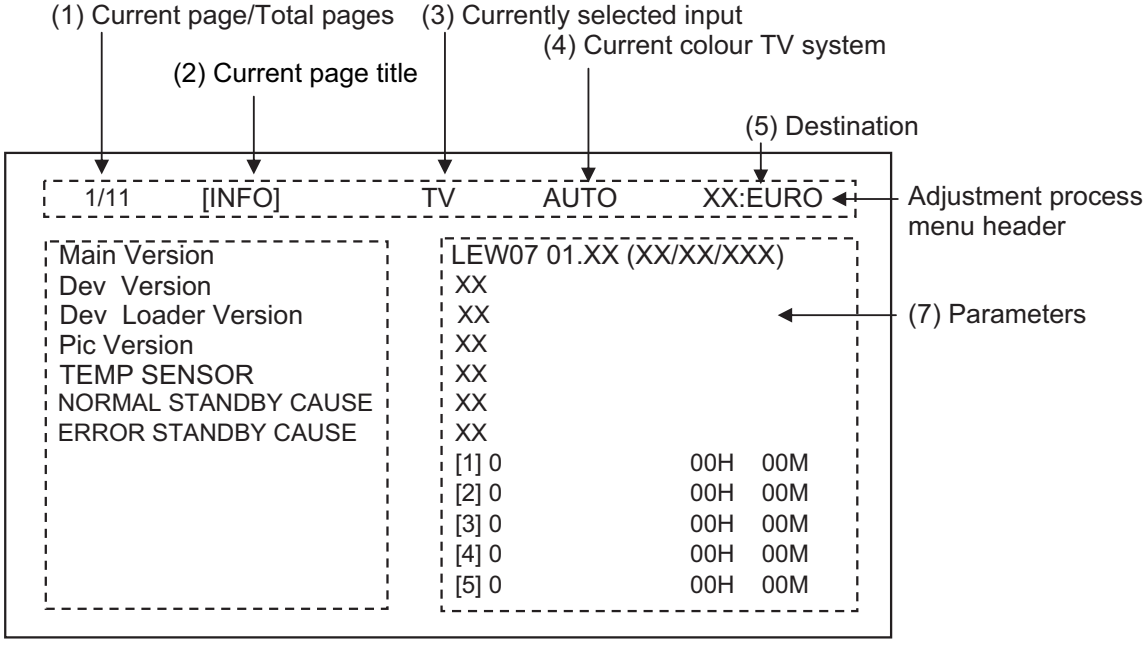
[4] Remote controller key operation and description of display in adjustment process mode.

1. key operation

Remote controller key	Main unit key	Function
P (∧ / ∨)	P (∧ / ∨)	Moving an item (line) by one (UP/DOWN)
◿ (+ / –)	◿ (+ / –)	Changing a selected line setting (+1/-1)
Cursor (▲ / ▼)	————	Turning a page (PREVIOUS/NEXT)
Cursor (◀ / ▶)	————	Changing a selected line setting (+10/-10)
⏎ Input button on remote controller	⏎ Input button	Input source switching (toggle switching) (TV→DTV→EXT1→EXT2→EXT3→EXT4→EXT5→EXT6→EXT7)
OK	————	Executing a function

* Input mode is switched automatically when relevant adjustment is started so far as the necessary input signal is available.

2. Description of display



[5] Adjustment process mode menu

The character string in brackets [ ] will appear as a page title in the adjustment process menu header.

Page	Line	Item	Description	Remarks (adjustment detail, etc.)
1/11		[INFO]		
	1	Main Version	LEW07 01XX(XX/XX0/XX)	Main microprocessor version
	2	Dev Version	XX	DTV microprocessor version
	3	Dev Loader Version	XX	DTV microprocessor-Loader version
	4	Pic Version	xxxxxx	Pic MICON version
	5	TEMP SENSOR	xxxxxx	
	6	NORMAL STANDBY CAUSE	RC_STANDBY	
	7	ERROR STANDBY CAUSE	[1] 00H 00M	Error standby cause Total operating time before error
			[2] 00H 00M	
			[3] 00H 00M	
			[4] 00H 00M	
			[5] 00H 00M	
2/11		[INIT]		
	1	Factory Init	[EURO/RUSSIA/SWEDEN]	Initialization to factory settings execution
	2	Inch Setting	XX	Inch present setting
	3	Public Mode	OFF/ON	HOTEL MODE flag setting
	4	Center Acutime	xxH xxM	Main operating hours
	5	RESET	OFF/ON	Main operating hours reset
	6	Backlight Acutime	xxH xxM	Backlight operating hours
	7	RESET	OFF/ON	Backlight operating hours reset
	8	Picture Read Pos X	0-xxx	x-axis setting of picture data
	9	Picture Read Pos Y	0-xxx	y-axis setting of picture data
	10	Picture Read	ON/OFF	Start/stop of picture data
3/11		[PAL.SECAM.N358]		
	1	RF-AGC ADJ	ENTER	RF-AGC auto adjustment execution
	2	PAL+TUNER ADJ	ENTER	PAL TUNER auto adjustment execution
	3	PAL ADJ	ENTER	PAL auto adjustment execution
	4	TUNER ADJ	ENTER	TUNER auto adjustment execution
	5	CONTRAST SD	32	PAL contrast adjustment
	6	SECAM CB OFFSET	1	SECAM offset adjustment
	7	SECAM CR OFFSET	1	SECAM offset adjustment
	8	TUNER A DAC	32	TUNER DAC adjustment
	9	RF AGC	16	RF AGC adjustment
4/11		[COMP 15K]		
	1	COMP 15K ADJ	ENTER	COMP15K auto adjustment execution
	2	COMP 15K CONTRAST	40	Contrast adjustment
5/11		[HDTV]		
	1	HDTV CONTRAST	41	HDTV Contrast adjustment
6/11		[SMPTE]		
	1	RF-AGC ADJ	ENTER	RF-AGC auto adjustment execution
	2	PAL-AGC ADJ	ENTER	PAL AGC auto adjustment execution
	3	PAL ADJ	ENTER	PAL auto adjustment execution
	4	TUNER ADJ	ENTER	TUNER auto adjustment execution
	5	CONTRAST SD	30	PAL contrast adjustment
	6	SECAM CB OFFSET	1	SECAM offset adjustment
	7	SECAM CR OFFSET	1	SECAM offset adjustment
	8	TUNER A DAC	36	TUNER DAC adjustment
	9	RF AGC	16	RF AGC adjustment
7/11		[M GAMMA INFO]		
	1	M GAMMA IN 1	160	W/B adjustment, gradation 1 input setting
	2	M GAMMA IN 2	320	W/B adjustment, gradation 2 input setting
	3	M GAMMA IN 3	480	W/B adjustment, gradation 3 input setting
	4	M GAMMA IN 4	640	W/B adjustment, gradation 4 input setting
	5	M GAMMA IN 5	800	W/B adjustment, gradation 5 input setting
	6	M GAMMA IN 6	960	W/B adjustment, gradation 6 input setting
	7	M GAMMA WRITE	OFF/ON	EEP writing of adjustment values
	8	M GAMMA RESET	OFF/ON	Initialization of adjustment values

Page	Line	Item	Description	Remarks (adjustment detail, etc.)
8/11		[M GAMMA 1-3]		
	1	M GAMMA R 1	0	W/B adjustment, gradation 1R adjustment value
	2	M GAMMA G 1	0	W/B adjustment, gradation 1G adjustment value
	3	M GAMMA B 1	0	W/B adjustment, gradation 1B adjustment value
	4	M GAMMA R 2	0	W/B adjustment, gradation 2R adjustment value
	5	M GAMMA G 2	0	W/B adjustment, gradation 2G adjustment value
	6	M GAMMA B 2	0	W/B adjustment, gradation 2B adjustment value
	7	M GAMMA R 3	0	W/B adjustment, gradation 3R adjustment value
	8	M GAMMA G 3	0	W/B adjustment, gradation 3G adjustment value
	9	M GAMMA B 3	0	W/B adjustment, gradation 3B adjustment value
	10	M GAMMA WRITE	OFF/ON	EEP writing of adjustment values
9/11		[M GAMMA 4-6]		
	1	M GAMMA R 4	0	W/B adjustment, gradation 4R adjustment value
	2	M GAMMA G 4	0	W/B adjustment, gradation 4G adjustment value
	3	M GAMMA B 4	0	W/B adjustment, gradation 4B adjustment value
	4	M GAMMA R 5	0	W/B adjustment, gradation 5R adjustment value
	5	M GAMMA G 5	0	W/B adjustment, gradation 5G adjustment value
	6	M GAMMA B 5	0	W/B adjustment, gradation 5B adjustment value
	7	M GAMMA R 6	0	W/B adjustment, gradation 6R adjustment value
	8	M GAMMA G 6	0	W/B adjustment, gradation 6G adjustment value
	9	M GAMMA B 6	0	W/B adjustment, gradation 6B adjustment value
	10	M GAMMA WRITE	OFF/ON	EEP writing of adjustment values
10/11		[ETC]		
	1	EEP CLEAR	OFF/ON	Clear of all adjustment value
	2	EEP CLEAR B	OFF/ON	Clear of adjustment value of B mode
	3	STANDBYCAUSE RESET	OFF/ON	Reset of STANDBY CAUSE
	4	AUTO INSTALLATION SW	0/1	1: * * * 0: * * *
	5	OPTION	0	
	6	COUNTRY	AUTO/EURO/UK	Destination setting
	7	L ERR RESET	0	LAMP ERR RESET Initializatio of L_ERR
	8	L ERR STOP	0/1	LAMP ERR Inhibit L_LRR detection
	9	DTV CLR	ENTER	Clear of DTV setting
	10	I2C-OFF	ENTER	I2C DATA execution
11/11		[COM-BIAS]		
	1	VCOM ADJ	63	
	2	TEST PATTERN	0	

[6] Special features

* ERROR STANDBY CAUSE (Page 1/11)

The total time when the unit enters the standby due to operational error and cause of error are recorded on EEPROM as much as possible.

The values can be used to locate the fault for repair.

* EEP CLEAR (Page10/11)

Clear of process adjustment EEP value.

[7] Video signal adjustment procedure

* The adjustment process mode menu is listed in Section 5.

1. Signal check

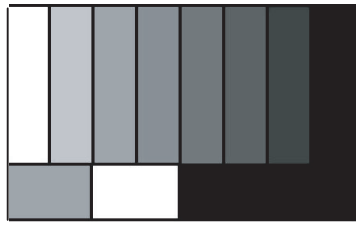
1. Signal generator level adjustment check (Adjustment to the specified level)

- Composite signal PAL : 0.7Vp-p ±0.02Vp-p (Pedestal to white level)
- 15K component signal (50 Hz) : Y level 0.7Vp-p ±0.02Vp-p (Pedestal to white level)
  PB, PR level 0.7Vp-p ±0.02Vp-p

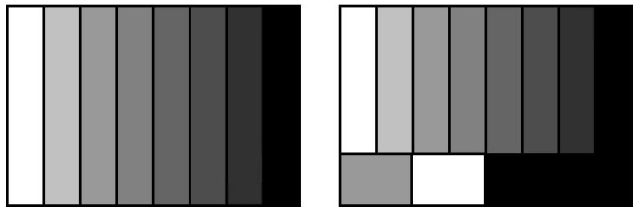
2. Entering the adjustment process mode

1. Enter the adjustment process mode according to Section 3.

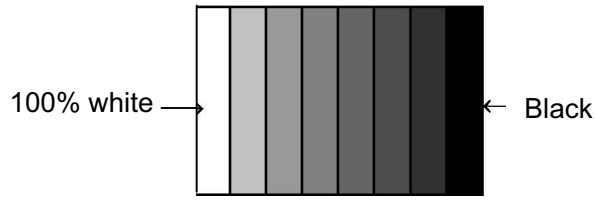
3. RF AGC adjustment

	Adjustment point	Adjustment Conditions	Adjustment procedure
1	Setting	[Signal] PAL Sprit Field Colour Bar RF signal UV [Terminal] TUNER	• Feed the PAL Sprit Field colour bar signal to TUNER. Signal level: 55 dB μV +1dB, -1dB (75Ω LOAD) [E-12CH]  ↑ 100% white
2	Auto adjustment performance	Adjustment process Page3	Bring the cursor on [■ RF AGC ADJ] and press [OK] [***OK***] appears when finished.

4. PAL signal & tuner adjustment

	Adjustment point	Adjustment Conditions	Adjustment procedure
1	Setting	[Signal] PAL Full Field Colour Bar Composite or RF signal [Terminal] EXT1 SCART IN TUNER	• Feed the PAL full field colour bar signal (75% colour saturation) to EXT1 SCART IN. • Feed the RF signal (PAL colour bar) to TUNER. • Make sure the PAL colour bar pattern has the sync level of 7:3 with the picture level. [VIDEO IN SIGNAL] [RF Signal]  ↑ 100% white ↑ 100% white
2	Auto adjustment performance	Adjustment process Page3	Bring the cursor on [■ PAL + TUNER ADJ] and press [OK] [***OK***] appears when finished.

5. ADC adjustment (Component 15K)

	Adjustment point	Adjustment Conditions	Adjustment procedure
1	Setting	[Signal] COMP15K, 50Hz 100% Full Field Colour Bar [Terminal] EXT5 COMPONENT IN	• Feed the COMPONENT 15K 100% full field colour bar signal (100% colour saturation) to EXT5 COMPONENT IN. 
2	Auto adjustment performance	Adjustment process Page4	Bring the cursor on [■ COMP15K ADJ] and press [OK] [***OK***] appears when finished.

[8] White Balance Adjustment

Adjustment gradation values (IN) appear on page 7/11 of process adjustment, and adjustment initial values (offset value) appear on pages 8/11 and 9/11. For white balance adjustment, adjust the offset values on pages 8/11 and 9/11.

[Condition of the unit for inspection] Modulated light: MAX (+8)

[Adjustment reference device] Minolta CA-210

[Adjustment]

Check that the values on page 7/11 of process adjustment are set as below. If not, change them accordingly.

M GAMMA IN 1	160	M GAMMA IN 2	320
M GAMMA IN 3	480	M GAMMA IN 4	640
M GAMMA IN 5	800	M GAMMA IN 6	960

1) Display the current adjustment status at point 6. (Page 7/11 of process adjustment)

   The display for checking the adjustment status is toggled by pressing the “6” button on the remote control.

   (Normal OSD display → “6” → display for check (OSD disappears) → “6” →normal OSD display → • • •)

2) Read the value of the luminance meter.

3) Change M GAMMA R6/M GAMMA B6 (Adjustment offset value) on page 9/11 of process adjustment so that the values of the luminance meter approach x = 0.272 and y = 0.277.

   (Basically, G is not changed. If adjustment fails with R and B, change G. When G is lowered, the weaker of R and B must be fixed.)

4) If G is changed in step 3), change the values of M GAMMA G1-M GAMMA G5 on pages 8/11 and 9/11 of process adjustment as follows. When not changed, go to step5).

   Offset value of M GAMMA G1 = (Offset value of M GAMMA G6) * (160/960)

   Offset value of M GAMMA G2 = (Offset value of M GAMMA G6) * (320/960)

   Offset value of M GAMMA G3 = (Offset value of M GAMMA G6) * (480/960)

   Offset value of M GAMMA G4 = (Offset value of M GAMMA G6) * (640/960)

   Offset value of M GAMMA G5 = (Offset value of M GAMMA G6) * (800/960)

5) Display the adjustment status of the current point 5. (Each time the “5” button on the remote control is pressed, the adjustment status check display is toggled.)

   (Normal OSD display → “5” → Check display (OSD disappears) → “5” → Normal OSD display → • • •)

   Change M GAMMA R5/M GAMMA B5 (adjustment offset value) on page 9/11 of process adjustment so that the values of the luminance meter approach x = 0.272 and y = 0.277.

6) Repeat step 5) for points 4, 3, 2, and 1.

[Adjustment reference standard value]

Adjustment spec	±0.004	Inspection spec	±0.006 (point 1)
Adjustment spec	±0.002	Inspection spec	±0.004 (Excluding the above-mentioned)

[9] Adjusting procedure by use of [RS-232C]

1) Get ready the PC with COM port (RS-232C) running on Windows 95/98/ME/2000/XP operating system, as well as the RS-232C cross cable.
2) Start the unit with the RS-232C cable connected.
3) Start the terminal software. (The freeware readily available on the Internet will do.)
4) Make the following settings.

Baud rate	9,600 bps
Data LENGTH	8 bit
Parity bit	None
Stop bit	1 bit
Flow control	None

5) If the settings are correct, the terminal software indicates "ERR" against pressing of the "ENTER" key.
6) After the settings are done correctly, it is possible to make an adjustment by typing in the command shown in the table below and pressing the "ENTER" key on the keyboard.
7) Command entry is successful if the terminal software indicates "OK" when the "ENTER" is pressed. If "ERR" is shown, retry to enter the command.
8) Send the process mode switching command to switch from the RS232C operation mode to the process mode.

   KRSW0001: "ERR" is returned.

   KKT10037: When "OK" is returned, the process mode becomes active. When "ERR", start over from KRSW0001.
9) Send each adjustment command.

RS-232C command list

Command	Function	Remarks
KYOF0000	Remote control disabled	
OSDS0001	OSD display inhibited	
SBSL0016	Light control level MAX	
MSET0001	Background adjustment start	
MSET0004	Initialization of adjustment value	
LEV60928	Gradation 6 (928-gradation adjustment)	
MG6G ****	Adjustment of G of gradation 6	0000 ~4095
MG6R ****	Adjustment of R of gradation 6	0000 ~ 4095
MG6B ****	Adjustment of B of gradation 6	0000 ~ 4095
LEV50800	Gradation 5 (800-gradation adjustment)	
MG5G ****	Input of G of gradation 5	Calculated value
MG5R ****	Input of R of gradation 5	0000 ~4095
MG5B ****	Input of B of gradation 5	0000 ~ 4095
LEV40656	Gradation 4 (656-gradation adjustment)	
MG4G ****	Input of G of 4	Calculated value
MG4R ****	Input of R of 4	0000 ~4095
MG4B ****	Input of B of 4	0000 ~ 4095
LEV30528	Gradation 3 (528-gradation adjustment)	
MG3G ****	Input of G of 3	Calculated value
MG3R****	Input of R of 3	0000 ~ 4095
MG3B ****	Input of B of 3	0000 ~ 4095
LEV20352	Gradation 2 (352-gradation adjustment)	
MG2G ****	Input of G of 2	Calculated value
MG2R ****	Input of R of 2	0000 ~ 4095
MG2B ****	Input of B of 2	0000 ~ 4095
LEV10184	Gradation 1(176-gradation adjustment)	
MG1G ****	Input of G of 1	Calculated value
MG1R ****	Input of R of 1	0000 ~ 4095
MG1B ****	Input of B of 1	0000 ~ 4095
MSET0003	Writing of adjustment value	

[10] Initialization to factory settings

Caution: When the factory settings have been made, all user setting data, including the channel settings, are initialized. (The adjustments done in the adjustment process mode are not initialized.) Keep this in mind when initializing these settings.

	Adjustment item	Adjustment conditions	Adjustment procedure
1	Factory settings	Forcibly turn off the power (See to below caution)	• Enter the adjustment process mode. • Move the cursor to [Factory Init] on page 2/11. • Use the R/C key to select a destination [EURO/RUSSIA/ SWEDEN]. And, press the [OK] key. • “EXECUTING...” appears and initialization starts. • After a while, “*** OK ***” appears and the setting is complete. NOTE: **Never turn the power off during initialization.**
			When performing factory settings (while displaying page 2 of adjustment process), confirm that the item “Inch Setting” or the panel size displayed in the upper right corner corresponds to each panel size.
			The following settings will be back to their factory ones. 1. User settings 2. Channel data (e.g. broadcast frequencies) 3. Maker option setting 4. Password data

After adjustments, exit the adjustment process mode.
To exit the adjustment process mode, unplug the AC power cord from the outlet to forcibly turn off the power.
When the power is turned off with the remote control, unplug the AC power cord and plug it back in (wait approximately 10 seconds before plugging in the AC power cord)

[11] Lamp error detection

1. Function description

This LCD colour television has a function (lamp error detection) to be turned OFF automatically for safety when the lamp or lamp circuit is abnormal

If the lamp or lamp circuit is abnormal, or some other errors happen, and the lamp error detection is executed, the following occur.

1- The main unit of television is turned OFF 5 seconds after it is turned ON. (The power LED on the front side of TV turns from green to red.)

2 - If the situation “1” happens 5 times sequentially, the power is turned on (relay is turned ON).

However, the backlight is not turned on, and then the relay is turned OFF after 5 to 6 seconds. (The power LED turns from green to red.)

2. Countermeasures

When television is turned OFF by the lamp error detection mentioned above, it enters the adjustment process with the power LED red. Entering the adjustment process turns OFF the error detection and turns ON TV. This enables the operation check to detect errors in the lamp or lamp circuit

Check whether “L ERROR RESET” on point 7, page 10/11 of the adjustment process is 1 or more. If it is 1 or more, it indicates the lamp error detection was executed. After confirming that the lamp or lamp circuit is normal, reset the lamp error counter pushing “OK” in the R/C. After resetting counter the label “***OK***” appears on Screen.

3. Reset standby cause error list

After confirming that the lamp error counter has been erased, select “STAND BY CAUSE RESET” on point 3, page 10/11 of the adjustment process and select ON using the right cursor. For execute press “OK” in the R/C and the label “***OK***” appears on Screen.

[12] Public Mode (Hotel Mode)

1. How to Enter in the Public Mode (Hotel Mode).

Turn on the power and enter in the Adjustment Process mode as usual.

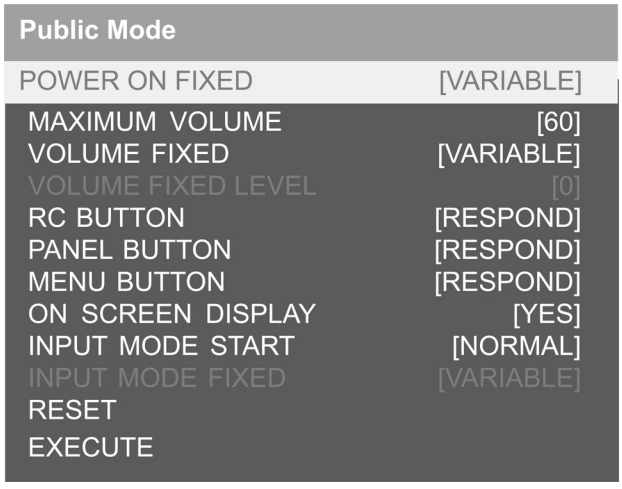
In the [INIT], Page 2/11 of Service, turns ON the Public Mode option.

Turn off TV by pressing Main Power switch.

While pressing “VOL+” and “INPUT” keys at the same time, press Main Power switch for more than 2 seconds.

Then, when you are asked for the password, enter “027”.

After this sequence the TV will turn on showing the Public Mode setting screen as follows:



Is possible to select each item of function by pressing cursor UP/DOWN keys on the remote control or CH(^)(v) keys on the LCD TV. (Except DTV)

The setting position of each item of functions is made by pressing cursor RIGHT/LEFT keys on the remote control or VOL (+) / (-) keys on the LCD TV.

Select EXECUTE position after you set all function, and press cursor RIGHT/LEFT keys on the remote control or VOL (+) / (-) keys on the LCD TV for confirmation.

2. Public Mode Settings.

1. POWER ON FIXED [VARIABLE ⟷ FIXED]
   When it is set to “FIXED” the TV is impossible to be switch off by Main Switch or Remote Control.
2. MAXIMUM VOLUME [0 ⟷ 60]
   Is possible to set the maximum volume at limited level.
3. VOLUME FIXED [VARIABLE ⟷ FIXED]
   Is possible to fix the sound volume at limited level.
   When “FIXED” is selected the sound volume before limited is fixed.
4. VOLUME FIXED LEVEL [0 ⟷ 60]
   If “FIXED” has been selected, is possible to set a fixed volume at the level that is chosen.
5. RC BUTTON [RESPOND ⟷ NO RESPOND]
   If “NO RESPOND” is selected, the remote control keys are inoperative.
6. PANEL BUTTON [RESPOND ⟷ NO RESPOND]
   If “NO RESPOND” has been selected, the set’s keys remain deactivated (Except POWER key).
7. MENU BUTTON [RESPOND ⟷ NO RESPOND]
   If “NO RESPOND” has been selected, “MENU” key, of remote control, is inoperative.
8. ON SCREEN DISPLAY [YES ⟷ NO]
   If “NO” has been selected, the On Screen Display does not appear.
9. INPUT MODE START [NORMAL → TV (X) →DTV→ INPUT1 → INPUT2 → INPUT3 → INPUT4 → INPUT5]
   When any other item than “NORMAL” has been selected, the sets will start in a selected input mode at the next power-on.
10. INPUT MODE FIXED [VARIABLE → FIXED]
    “FIXED” has been selected, any channels and input modes other than those selected at the start mode cannot be picked up.

11. RESET

Cancel all Public Mode settings. (It returns to the factory settings)

12. EXECUTE

Select this item, and press cursor RIGHT / LEFT keys on the remote control or VOL (+) / (-) keys on the LCD TV for confirmation the functions settings.

CHAPTER 4. TROUBLESHOOTING TABLE

[1] TROUBLESHOOTING TABLE

The sound is not emitted from the speaker though the picture has come out.

No sound output in all modes.?

↓

Is the audio signal output of pins (28/L) and (27/R) of IC3001 (MAIN_MICON) normal?

NO → Check IC3001 and its peripheral circuits.

↓ YES

Is audio signal input to pin(5/L), pin(9/R) of IC2701(AMP)?

NO → Check the line between IC3001 and IC2701.

↓ YES

Is MUTE circuit [MUTE_SP_LINE, RESET_N_LINE] normal?

NO → Check the MUTE_SP_LINE and RESET_N_LINE. (Q2701, etc.)

↓ YES

Is the audio signal output of pins (3, 4) (L-ch) and (2, 1) (R-ch) of P2701(AOUDIO-CONNECTOR) normal?

NO → Check IC2701 and its peripheral circuits.

↓ YES

Check Speaker (right and left) and wire harness.

No sound (during the reception of TV(ANALOG) broadcasting)

Does not the sound go out though the picture has come out when UHF/VHF is received?

↓

Is the SIF signal output from pin (4) of TUNER (TU201)?

NO → Check the tuner and its peripheral circuits. Replace as required.

↓ YES

Is the SIF signal sent to pins (31) of IC3001 (MAIN_MICON)?

NO → Check the line between TU201 and IC3001.

↓ YES

Refer to “No sound output in all modes”.

No sound (during the reception of TV(DIGITAL) broadcasting)

Does not the sound go out though the picture has come out when DTV is received?

↓

Is the audio signal output from PIN(24,25)/ LETFT_M/P, PIN(28,29)/ RIGH_M/P of IC4001(SET-TOP_BOX_DECODER).

NO → Check IC4001 and its peripheral circuits.

↓ YES

Is the audio signal input to PIN(6,5)/ LETFT_M/P, (2,3)/ RIGH_M/P of IC4005(OP-AMP)?

NO → Check the line between IC4001 and IC4005.

↓ YES

Is the audio signal sent from PIN(7)/ AIN1L, (1)/AIN1R of IC4005 to PIN(10), PIN(9) of IC3001 (MAIN_MICON)?

NO → Check the line between IC4005 and IC3001.

↓ YES

Refer to “No sound output in all modes”.

No sound from external input devices (1)

Does not the sound of the audio signal input to EXT1(SCART1) go out?
Does not the sound of the audio signal input to EXT2(SCART2) go out?

↓

EXT1 Is the audio signal properly sent to pins (6) (AIN3_L) and (2) (AIN3_R) of SCART1(SC1102)?	NO →	Check the setting of an external input device that connects of SC1102.
EXT2 Is the audio signal properly sent to pins (6) (AIN2_L) and (2) (AIN2_R) of SCART2(SC1101)?	NO →	Check the setting of an external input device that connects of SC1101.

↓ YES

EXT1 Is the audio signal properly sent to pins (14) (AIN3_L) and (13) (AIN3_R) of IC3001(MAIN_MICON)?	NO →	Check the line between SC1102 and IC3001.
EXT2 Is the audio signal properly sent to pins (12) (AIN2_L) and (11) (AIN2_R) of IC3001(MAIN_MICON)?	NO →	Check the line between SC1101 and IC3001.

↓ YES

Refer to “No sound output in all modes”.

No sound from external input devices (2)

Does not the sound of the audio signal input to EXT3 go out?

MINI AV UNIT:

Is audio signal output from pin(5/IN3L), (4/IN3R) of input terminal J1002 to pin(8), (6) of connector SC1001?

NO → Check connection of between from J1002 to SC1001 and the external input device.

YES

MAIN UNIT:

Is audio signal input to pin(8/IN3L), (6/IN3R) of connector P1001?

NO → Check the connector(SC1001/ P1001).

YES

Is audio signal input to pin(1/IN3L), (6/IN3R) of IC1301 (AUDIO_SELECTOR)?

NO → Check the line between P1001 and IC1301.

YES

Is the audio signal sent to pin (15/AIN4L), (11/AIN4R) of IC1301?

NO → Check IC1301 and its peripheral circuits.

YES

Is audio signal input from pin (15/AIN4L), (11/AIN4R) of IC1301 to pin (16, 15) of IC3001 (MAIN_MICON)?

YES → Refer to “No sound output in all modes”

NO → Check the line between IC1301 and IC3001.

No sound from external input devices (3)

Does not the sound of the audio signal input to EXT4 go out?

Is audio signal sent from pin(2/L) and (3/R) of input terminal J1301 to pin(5) and (8) of IC1301 (AUDIO_SELECTOR)?

NO → Check the connection between J1301 and the peripheral circuit, the external input devices.

Does not the sound of the audio signal input to EXT6(Analog) go out?

Whether "Analog" has selected it in the Audio setup of the HDMI option is checked.

Is audio signal sent from pin(2/L) and (3/R) of input terminal J1302 to pin(3) and (7) of IC1301(AUDIO_SELECTOR)?

NO → Check the connection between J1302 and the peripheral circuit, the external input devices.

YES

Is the audio signal sent to pin (15/AIN4L), (11/AIN4R) of IC1301?

NO → Check IC1301 and its peripheral circuits.

YES

Is audio signal input from pin (15/AIN4L), (11/AIN4R) of IC1301 to pin (16, 15) of IC3001 (MAIN_MICON)?

YES

Refer to “No sound output in all modes”

NO

Check the line between IC1301 and IC3001.

No sound from external input devices (4)

Does not the sound of the audio signal input to EXT5 go out?

Is audio signal output from pin(2/COMP_AL), (4/ COMP_AR) of input terminal J1303 to pin(13), (9) of IC1301 (AUDIO_SELECTOR)?

NO → Check connection of between from J1303 to IC1301 and the external input device.

YES

Is the audio signal sent to pin (15/AIN4L), (11/AIN4R) of IC1301?

NO → Check IC1301 and its peripheral circuits.

YES

Is audio signal input from pin (15/AIN4L), (11/AIN4R) of IC1301 to pin (16, 15) of IC3001 (MAIN_MICON)?

YES

Refer to “No sound output in all modes”

NO

Check the line between IC1301 and IC3001.

No sound from external input devices (5)

Does not the sound of the audio signal input to EXT6/7(HDMI) go out?

Is picture of the signal input from EXT6/7 displayed?

NO → Refer to “Does not the picture of the HDMI signal input to EXT6/7 go out?”.

YES

Is the HDMI_SCK/ WS/ SD0 audio signal output from pin(86), (85), (84) of IC1951 (HDMI RECEIVER) to pin(39), (40), (38) of IC3001 (MAIN_MICON)?

NO → Check the line between IC1951 and IC3001, and their peripheral circuits.

YES

Refer to “No sound output in all modes”.

The audio signal is not output (1)

No audio signal output from SCART1 terminal.

Is audio signal sent to pins (3/L-ch) and (1/R-ch) of SCART1(SC1102)?
- YES → Check the connection to SCART1 and external devices.
- NO ↓

Is S-MUTE-LINE [pin(62) of IC2302(SUB_MICON)] at H?
- YES → Check the peripheral circuits of IC2302 and S-MUTE_LINE. (Q1101, etc.)
- NO ↓

Is audio signal sent to pins (24/L-ch) and (23/R-ch) of IC3001(MAIN_MICON)?
- YES → Check the line between SC1102 and IC3001. (Q1106, Q1105, etc.)
- NO ↓

Check IC3001 and its peripheral circuits.

The audio signal is not output (2)

No audio signal output from SCART2 terminal.

Is audio signal sent to pins (3/L-ch) and (1/R-ch) of SCART2(SC1101)?
- YES → Check the connection to SCART2 and external devices.
- NO ↓

Is S2-MUTE-LINE [pin(63) of IC2302(SUB_MICON)] at H?
- YES → Check the peripheral circuits of IC2302 and S2-MUTE_LINE. (Q1102, etc.)
- NO ↓

Is audio signal sent to pins (22/L-ch) and (21/R-ch) of IC3001(MAIN_MICON)?
- YES → Check the line between SC1101 and IC3001. (Q1108, Q1107, etc.)
- NO ↓

Check IC3001 and its peripheral circuits.

The audio signal is not output (3)

NO

No audio signal output from AUDIO_OUTPUT terminal.

↓

Is audio signal output to pin(2/L-ch), (4/R-ch) of audio output terminal J1304? —YES→ Check the connection to J1304 and external devices.

↓ NO

Is S-MUTE-LINE [pin(62) of IC2302(SUB_MICON)] at H? —YES→ Check the peripheral circuits of IC2302 and S-MUTE_LINE. (Q1303, etc.)

↓ NO

Is audio signal sent to pins (22/L-ch) and (21/R-ch) of IC3001(MAIN_MICON)? —YES→ Check the line between J1304 and IC3001. (Q1302, Q1301, etc.)

↓ NO

Check IC3001 and its peripheral circuits.

The audio signal is not output (6)

No sound from HEDPHONE_OUTPUT terminal.

↓

Is the HP_PLUG signal input into pin (208) of MAIN_UNIT's IC3001 (MAIN_MICON) from pin (6) of a headphone terminal (J1003)? —NO→ Check the line between J1003 and IC3001. (SC1001/P1001, IC3001, etc.)

↓ YES

Is the audio signal output to pin(2/L-ch) pin(3/R-ch) of headphone terminal J1003? —YES→ Check HEAD-PHONE (J1003) or peripheral circuits.

↓ NO

Is the audio signal input into pin (3) and (1) of connector SC1001 from pin(3/L-ch),(1/R-ch) of connector P1001? —YES→ Check the line between P1001 and J1003. (SC1001/P1001, etc.)

↓ NO

Is HP-MUTE-LINE [pin(40) of IC2302(SUB_MICON)] at H? —YES→ Check the peripheral circuits of IC2302 and HP-MUTE_LINE. (Q1001, etc.)

↓ NO

Is audio signal sent to pins (26/L-ch) and (25/R-ch) of IC3001(MAIN_MICON)? —YES→ Check the line between P1001 and IC3001. (IC1102, etc.)

↓ NO

Check IC3001 and its peripheral circuits.

No picture on the display (1)

The picture doesn't appear in all modes.

Is the LVDS signal output from IC3001 (MAIN_MICON)?
LVDS0_P/N(140/141), LVDS1_P/N(137/138), LVDS2_P/N(134/135), LVDS3_P/N(128/129), LVDS4_P/N(125/126), LVDS_CP/CN(131/132).

NO → Check IC3001 and its peripheral control circuits.

YES

Is the LVDS signal input to IC8103 (LCD_CONTROL)?
A0+/-(165/164), A1+/-(167/166), A2+/-(169/168), A3+/-(189/188), A4+/-(191/190), ACK+/-(187/186)

NO → Check the line between IC3001 and IC8103.

YES

Is the control signal of LCD controller normal?

NO → Check the control signal R/L_LINE, U/D_OUT_LINE, FRAME_LINE, BANK_SEL_LINE, TEMP1/2/3_LINE, QS_EN_LINE, etc.

YES

Is VCC_3.3V, VCC_2.5V or VCC_1.5V supplied to IC8103?

NO → Check if IC8402(MULTI_CHANNEL_SYSTEM_POWER_SUPPLY) and the peripheral power supply circuit are normal.

YES

Are the video signals BR/BG/BB (0_P/M-3_P/M), FR/FG/FB (0_P/M-3_M/P) and the CLK signals (BCLK_P/M, FCLK_P/M) output from IC8103?

NO → Check IC8103 and its peripheral circuits.

YES

Are BR/BG/BB (0_P/M-3_P/M), BCLK (P/M) input to connector SC8201 and FR/FG/FB (0_P/M-3_P/M), FCLK (P/M) input to connector SC8202?

NO → Check the line between IC8103 and SC8201/SC8202.

YES

Are the gradation signals (VH/VL_247, 191, 159, 63, 31, 0) normally sent from IC8201 (GLAY_LEVEL _GENERATION) to SC8201/SC8202?

NO → Check IC8201 and that the communication between its peripheral circuits and IC8103 is normal. (Each line of DAC_CLK/DATA/LATCH)

YES

Check the connectors SC8201/SC8202 and LCD panel.

No picture on the display (2)

Does not the picture come out when VHF/UHF is received?

Is the video signal(VIN1) output from pin (6) of TUNER (TU201)?

NO → Check whether I2C is normally accessed between named TU201 and IC3001(MAIN_MICON).

YES

Is the video signal(VIN1) sent to pins (191) of IC3001 (MAIN_MICON)?

NO → Check the line between TU201 and IC3001.

YES

Refer to “The picture doesn't appear in all modes.”

No picture on the display (3)

Does not the picture come out when DTV is received?

Is the voltage of regulation for a TUNER circuit and the power supply terminal of IC207 (COFDM) supplied? (Refer to the circuit diagram)

NO → Each power supply circuit is checked.

YES

Is IF signal output from pin (16),(17) of TUNER(TU201) to pin(10),(11) of IC207(COFDM)?

NO →

YES

Similarly, is communication control carried out between pin (8),(9) of TU201, and pin (20),(21)of IC207?

NO →

Check the tuner, IC207 and their peripheral circuits.
Replace as required.

YES

Does X201(27MHz) oscillate?

NO → Check X201 and its peripheral circuits.

YES

Is the MPEG data (FESCL, FESDA, FEVALID, FES-TROUT) output from IC207 to IC4001?

NO → Check if the line between IC207 and IC4001 and the control signals FERROR_LINE and FERESET_LEINE are normal. (IC4402, etc.)

YES

Are the video signals (DTV_R/G/B, DTV_CVBS) output from PIN(15,16,17), PIN(18) of IC4001?

NO → Check if IC4001, IC4201(SDRAM), IC4251(FLASH_MEMORY) and IC4202(B+2.5V_REG) are normal.

YES

Are the video signals (DTV_R/G/B, DTV_CVBS) input to PIN(181,180,179), PIN(184) of IC3001 (MAIN_MICON)?

NO → Check the line between IC4001 and IC3001.
(IC1401, IC1001, Q1031, etc.)

YES

Refer to “The picture doesn't appear in all modes.”

[External input EXT1,EXT2] No picture on the display (4)

Does not the picture of the CVBS signal input to EXT1 go out?
Does not the picture of the CVBS signal input to EXT2 go out?

↓

<EXT1>
Is CVBS signal sent to pin (20) of SCART1 (SC1102)?

NO → Check the setting of an external input device that connects of SC1102.

<EXT2>
Is CVBS signal sent to pin (20) of SCART2 (SC1101)?

NO → Check the setting of an external input device that connects of SC1101.

↓ YES

<EXT1>
Is CVBS signal sent to pin (6) of IC1502(SW.)?

NO → Check the line between SC1102 and IC1502

<EXT2>
Is CVBS signal sent to pin (4) of IC1502(SW.)?

NO → Check the line between SC1101 and IC1502.

↓ YES

Is CVBS signal output to pin(190) of IC3001(MAIN_MICON) from pin(2) of IC1502?

NO → Check the line between IC1502 and IC3001. (SCART12_LINE, etc.)

↓ YES

Refer to “The picture doesn't appear in all modes.”

[External input EXT1,EXT2] No picture on the display (5)

Does not the picture of the R/G/B video signal input to EXT1 go out?
Does not the picture of the R/G/B video signal input to EXT2 go out?

↓

<EXT1>
Is RGB1 signal sent to pins (15)/R1, (11)/G1 and (7)/B1 of SCART1(SC1102)?

NO → Check the setting of an external input device that connects of SC1102.

<EXT2>
Is RGB2 signal sent to pins (15)/R2, (11)/G2 and (7)/B2 of SCART2(SC1101)?

NO → Check the setting of an external input device that connects of SC1101.

↓ YES

<EXT1>
Is RGB1 signal sent to pins (187)/R1, (175)/G1 and (182)/B1 of IC3001(MAIN_MICON)?

NO → Check the line between SC1102 and IC3001.

<EXT2>
Is RGB2 signal sent to pins (178)/R2, (177)/G2 and (176)/B2 of IC3001(MAIN_MICON)?

NO → Check the line between SC1101 and IC3001.

↓ YES

Refer to “The picture doesn’t appear in all modes.”

[External input EXT1,EXT2] No picture on the display (6)

Does not the picture of the Y/C video signal input to EXT1 go out?
Does not the picture of the Y/C video signal input to EXT2 go out?

↓

<EXT1> Is Y/C video signal sent to pins (20)/Y and (15)/C of SCART1 (SC1102)?	NO →	Check the setting of an external input device that connects of SC1102.
<EXT2> Is Y/C video signal sent to pins (20)/Y and (15)/C of SCART2 (SC1101)?	NO →	Check the setting of an external input device that connects of SC1101.

↓ YES

<EXT1> Is Y/C signal sent to pins (190)/Y, (187)/C of IC3001(MAIN_MICON)?	NO →	Check the line between SC1102 and IC3001. (IC502, SCART12_LINE, etc.)
<EXT2> Is Y/C signal sent to pins (190)/Y, (178)/C of IC3001(MAIN_MICON)?	NO →	Check the line between SC1101 and IC3001. (IC502, SCART12_LINE, etc.)

↓ YES

Refer to “The picture doesn’t appear in all modes.”

<When EXT3 is used for external input> No picture on the display (7)

Does not the picture of the composite video signal input to EXT3 go out?

↓

Is CVBS signal output from pin(6) in input terminal J1002 to pin(10) of connector SC1001?	NO →	Check the line between J1002 and SC1001.

↓ YES

Is the CVBS signal input from pin(10) of connector P1001 to pin(1) of IC1001(VIDEO SELECTOR)?	NO →	Check the line between P1001 and IC1001. (Connector SC1001/P1001, etc.)

↓ YES

Is CVBS signal output to pin(184) of IC3001(MAIN_MICON) from pin(7) of IC1001?	NO →	Check the line between IC1001 and IC3001. (SV1JSW_LINE, EXT_DTV_LINE, etc.)

↓ YES

Refer to “The picture doesn't appear in all modes.”

<When EXT3 is used for external input> No picture on the display (8)

Does not the picture of the Y/C video signal input to EXT3 go out?

Is Y/C signal input into pin(14), (12) of connector SC1001 from pin(3)/Y, (4)/C of J1001?
- NO → Check the line between J1001 and SC1001.
- YES ↓

Is Y/C signal output from pin(14)/Y,(12)/C of connector P1001?
- NO → Check the connector SC1001/P1001.
- YES ↓

Is the Y/C video signal detection function SV1JSW signal from pin (6) of the input terminal J1001 normal?
- NO → Check J1001 or peripheral circuits.
- YES ↓

Is the SV1JSW signal input to pin(2) of IC1001 (VIDEO_SELECTOR) and pin(27) of IC2302 (SUB_MICON)?
- NO → Check the between SV1JSW_LINE J1001 and IC1001/IC2302. (Connector SC1001/P1001, etc.)
- YES ↓

Is Y/C signal sent to pins (184), (183) of IC3001(MAIN_MICON)?
- NO → Check the line between P1001 and IC3001. (IC1001, EXT_DTV_LINE etc.)
- YES ↓

Refer to “The picture doesn't appear in all modes.”

<When EXT4 is used for external input> No picture on the display (9)

Does not the picture of the DVI(ANALOG) video signal input to EXT4(15pin-D-SUB terminal) go out?

Are the video signal and the synchronized signal input from pin(1, 2, 3)/(R, G, B), (13 and 14)/(V, H) of input terminal D-SUB (SC1201)?
- NO → Check the connection and setup with the external DVI devices.
- YES ↓

Is EDID data pin (6)/SCL, pin(5)/SDA of IC1201 (EEPROM) accessed, and is it read from pin (15),(12) of a DVI terminal(SC1201)?
- NO → Is access possible in the re-writing or exchange of EDID data of IC1201?
  - NO → Check the circumference circuit of SC1201, IC1201.
- YES ↓

Are the video signal and the synchronized signal input from pin(174, 173, 172)/(R, G, B), pin(171, 47)/(H, V) of IC3001(MAIN_MICON)?
- NO → Check the line between SC1201 and IC3001. (IC1941,etc)
- YES ↓

Refer to “The picture doesn't appear in all modes.”

<When EXT5 is used for external input> No picture on the display (10)

Does not the picture of the component video signal input to EXT5 go out?

Is COMPONENT video signal input into pin(3)/Y, (5)/Pb, (7)/Pr of the input terminal J1401?

NO → Check the connection of J1401 and the external input device.

YES

Is COMPONENT video signal input into pin(1)/Y, (6)/Pb, (9)/Pr of IC1401(VIDEO_BUFFER)?

NO → Check the line between J1401 and IC1401.

YES

Is COMPONENT signal output into pin(180), (179), (181) of IC3001(MAIN_MICON) from pin(20)/Y, (18)/PB, (16)/PR of IC1401?

NO → Check the line between IC1401 and IC3001.

YES

Refer to “The picture doesn't appear in all modes”

<When EXT6/7 is used for external input> No picture on the display (11)

Does not the picture of the HDMI signal input to EXT6/7 go out?

EXT6
Is the HDMI detection function output from pin (19) of the HDMI terminal (SC1901) normal?

NO → EXT6
Check between SC1901and IC3001(MAIN_MICON) of pin(205). (Q1905, etc.)

EXT7
Is the HDMI detection function output from pin (19) of the HDMI terminal (SC1921) normal?

NO → EXT7
Check between SC1921 and IC3001(MAIN_MICON) of pin(203). (Q1925, etc.)

Check the connection and setup with the external HDMI devices.

YES

EXT6
Is EDID data pin (6)/SCL, pin(5)/SDA of IC1902(EEPROM) accessed, and is it read from pin (15),(16) of a HDMI terminal(SC1901)?

NO → Is access possible in the re-writing or exchange of EDID data of IC1902?

NO
Check the circumference circuit of SC1901, IC1902 and IC1951(HDMI_RECEIVER).

EXT7
Is EDID data pin (6)/SCL, pin(5)/SDA of IC1922(EEPROM) accessed, and is it read from pin (15),(16) of a HDMI terminal(SC1921)?

NO → Is access possible in the re-writing or exchange of EDID data of IC1922?

NO
Check the circumference circuit of SC1921, IC1922 and IC1951(HDMI_RECEIVER).

YES

EXT6
Is TMDS signal input into pin(59,58)/TMDS2_CLKP/N, (63,62)/TMDS2_D0P/N, (67,66)/TMDS2_D1P/N, (71,70)/TMDS2_D2P/N of IC1951 from SC1901?

NO → Check the line between SC1901 and IC1951.

EXT7
Is TMDS signal input into pin(40,39)/TMDS1_CLKP/N, (44,43)/TMDS1_D0P/N, (48,47)/TMDS1_D1P/N, (52,51)/TMDS1_D2P/N of IC1951 from SC1921?

NO → Check the line between SC1921 and IC1951.

YES

Is each signal output from DINR[0:7], DING[0:7], DINB[0:7], pin(2,3)/HDMI_H/V, (1)/DINEN, (121)/DINCK, of IC1951?

NO → Is the control signal of IC1951 and IC3001 (MAIN_MICON) normal? (HDMI_RST, IC1941, etc.)

YES

Is each signal of DINR[0:7], DING[0:7], DINB[0:7], pin(171,47)/HDMI_H/V, (48)/DINEN, (49)/DINCK of IC3001(MAIN_MICON) input?

YES

Refer to “The picture doesn't appear in all modes.”

NO

Check the line between IC1951 and IC3001. (IC1941, etc.)

<During external connection> No picture on the monitor (1)

SCART1:

No picture appears on EXT1 - connected monitor during the tuner (U/V) reception.

↓

Checklist:
1) Is the Signal Type (item) in MENU-Option-Input Select equal to Signal Type of an external device?... Set it to"CVBS", "Y/C" or "RGB".
2) Is ANT-CABLE disconnected or connected improperly? ... Connect it correctly as per the operation manual.
3) The picture is sent to the monitor in a CVBS signal if the source during display is TV, CVBS or Y/C of EXT1-3.
   When sent by component, etc., that signal is not sent to the monitor.
4) When the monitor picture is not sent and is not displayed on the monitor, refer to "No picture" for each terminal.
5) The video output from EXT1 is not the monitor output (output of the picture now watching).
   The picture of the last selected TV channel is always sent to EXT1. (Specification)

↓

Is CVBS signal output into pin(19) of SC1102(SCART1) from pin(2) of IC1102(SW)? — YES → Check the setting of an external input device that connects of SC1102.

↓ NO

Is CVBS signal output from PIN(195) of IC3001(MAIN_MICON) to PIN(6) of IC1102? — YES → Check the line between IC1102 and SC1102.

↓ NO

Is video signal (CVBS) sent to pin (195) of IC3001? — YES → Check power supply of IC3001 and peripheral circuits.

↓ NO

Is VIN1 signal output from pin(6) of TUNRE(TU201)? — YES → Check the line between TU201 and IC3001.

↓ NO

Check whether I2C is normally accessed between TU201 and IC3001.

<During external connection> No picture on the monitor (2)

SCART1:

No picture appears on EXT1 - connected monitor during the tuner (DTV) reception.

↓

Checklist:
1) Is the Signal Type (item) in MENU-Option-Input Select equal to Signal Type of an external device? ... Set it to “CVBS”, “Y/C” or “RGB”.
2) Is ANT-CABLE disconnected or connected improperly? ... Connect it correctly as per the operation manual.
3) The picture is sent to the monitor in a CVBS signal if the source during display is TV, CVBS or Y/C of EXT1-3.
   When sent by component, etc., that signal is not sent to the monitor.
4) When the monitor picture is not sent and is not displayed on the monitor, refer to “No picture” for each terminal.
5) The video output from EXT1 is not the monitor output (output of the picture now watching).
   The picture of the last selected TV channel is always sent to EXT1. (Specification)

↓

Is DTV_CVBS signal output from pin(2) of IC1102(SW) to pin(19) of SC1102(SCART1)? — YES → Check the setting of an external input device that connects of SC1102.

↓ NO

Is DTV_CVBS signal output from PIN(195) of IC3001(MAIN_MICON) to PIN(6) of IC1102? — YES → Check the line between IC1102 and SC1102.

↓ NO

Is video signal (DTV_CVBS) sent to pin (184) of IC3001? — YES → Check power supply of IC3001 and peripheral circuits.

↓ NO

Is DTV_CVBS signal output from PIN(18) of IC4001(SET-TOP_BOX_DECODER)? — YES → Check the line between IC4001 and IC3001. (IC1001, EXT_DTV_LINE, etc.)

↓ NO

Check the IC4001 and its peripheral circuits.

<During external connection> No picture on the monitor (3)

SCART2:

No picture from EXT1 appears on EXT2-connected monitor.
NOTE: Normally, if the screen during display is sent to EXT2, no picture is sent to EXT2.

↓

Checklist:
1) Is the Signal Type (item) in MENU-Option-Input Select equal to Signal Type of an external device? ... Set it to “CVBS”, “Y/C” or “RGB”.
2) The picture is sent to the monitor in a CVBS signal if the source during display is TV, CVBS or Y/C of EXT1-3.
3) When the monitor picture is not sent and is not displayed on the monitor, refer to “No picture” for each terminal.
   When sent by component, etc., that signal is not sent to the monitor.
4) The video output from EXT1 is not the monitor output (output of the picture now watching).
   The picture of the last selected TV channel is always sent to EXT1. (Specification)

↓

Is CVBS signal output into pin(19) of SC1101(SCART2) from pin(2) of IC1101(SW)? — YES → Check the setting of an external input device that connects of SC1101.

↓ NO

Is CVBS signal output into pin(194) of IC3001(MAIN_MICON) from pin(6) of IC1101? — YES → Check the line between IC1101 and SC1101.

↓ NO

Is video signal (VIN2) from EXT1 sent to pin (190) of IC3001 (MAIN_MICON)? — YES → Check power supply of IC3001 and peripheral circuits.

↓ NO

Is CVBS signal sent to pin (20) of SCART1(SC1102)? — YES → Check the line between SC1102 and IC3001. (IC1502, SCART12_LINE, etc.)

↓ NO

Check the setting of an external input device that connects of SC1102.

<During external connection> No picture on the monitor (4)

SCART2:

No picture from EXT3 appears on EXT2- connected monitor.

↓

Checklist:
1) Is the Signal Type (item) in MENU-Option-Input Select equal to Signal Type of an external device? ... Set it to “CVBS”, “Y/C” or “RGB”.
2) The picture is sent to the monitor in a CVBS signal if the source during display is TV, CVBS or Y/C of EXT1-3.
When sent by component, etc., that signal is not sent to the monitor.
3) When the monitor picture is not sent and is not displayed on the monitor, refer to “No picture” for each terminal.
4) The video output from EXT1 is not the monitor output (output of the picture now watching).
The picture of the last selected TV channel is always sent to EXT1. (Specification)

↓

Is CVBS signal output into pin(19) of SC1101(SCART2) from pin(2) of IC1101(SW)? — YES → Check the setting of an external input device that connects of SC1101.

↓ NO

Is CVBS signal output into pin(194) of IC3001(MAIN_MICON) from pin(6) of IC1101? — YES → Check the line between IC1101 and SC1101.

↓ NO

Is CVBS signal output into pin(194) of IC3001 from pin(6) of IC1101(VIDEO_SELECTOR)? — YES → Check power supply of IC3001 (MAIN_MICON) and peripheral circuits.

↓ NO

Is CVBS signal output into PIN(1) of IC1001 from PIN(10) of connector P1001? — YES → Check IC1001 and its peripheral circuits. (SV1JSW_LINE, EXTDTV_LINE)

↓ NO

Check the setting of an external input device that connects of SC1102.

↓

MINI_AV_UNIT:

↓ NO

Is the video signal output into PIN(10) of connector SC1001 from PIN(6) of input terminal J1002? — YES → Check the connector SC1001/P1001.

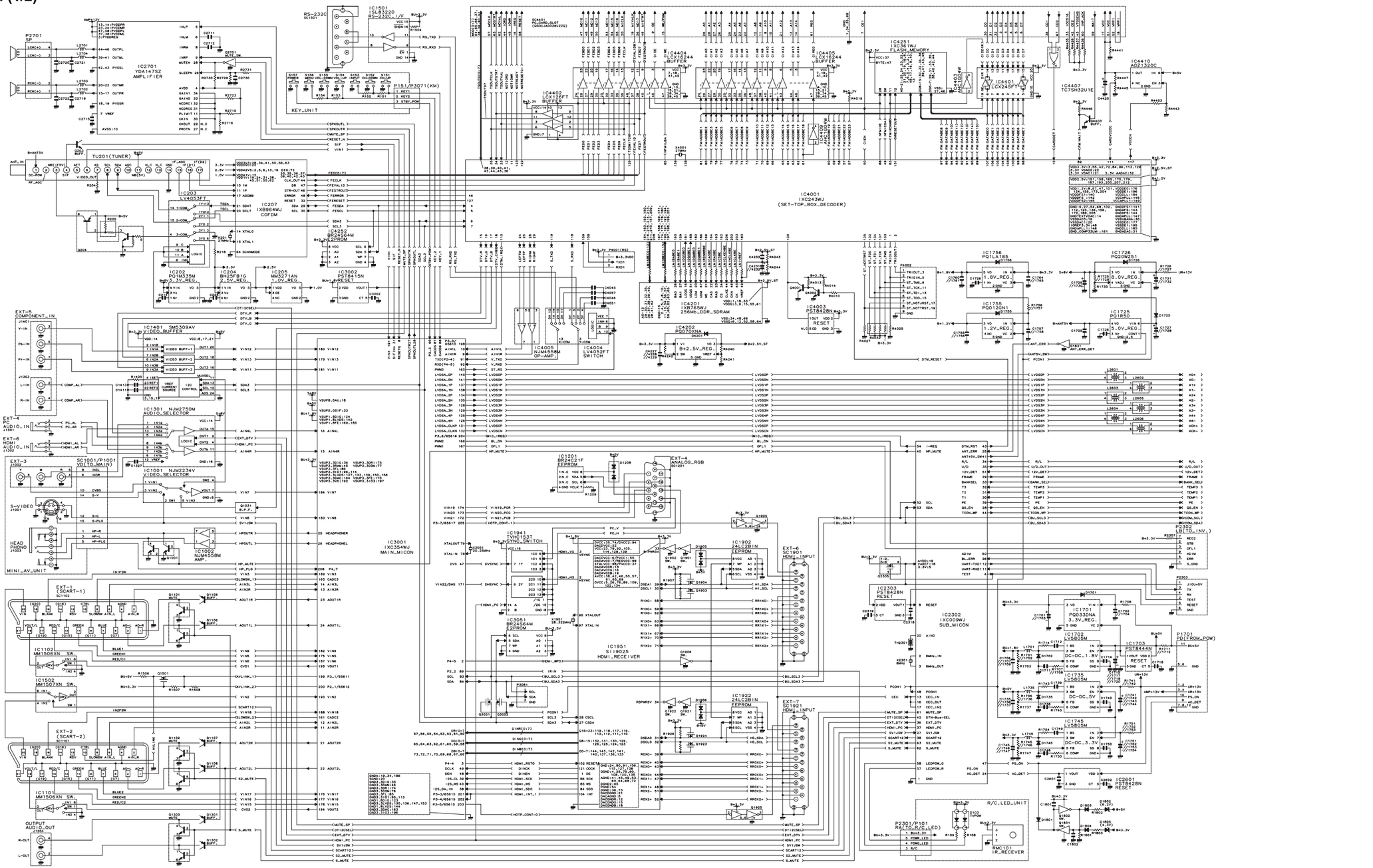
↓ NO

Check the setting of an external input device that connects of J1002.

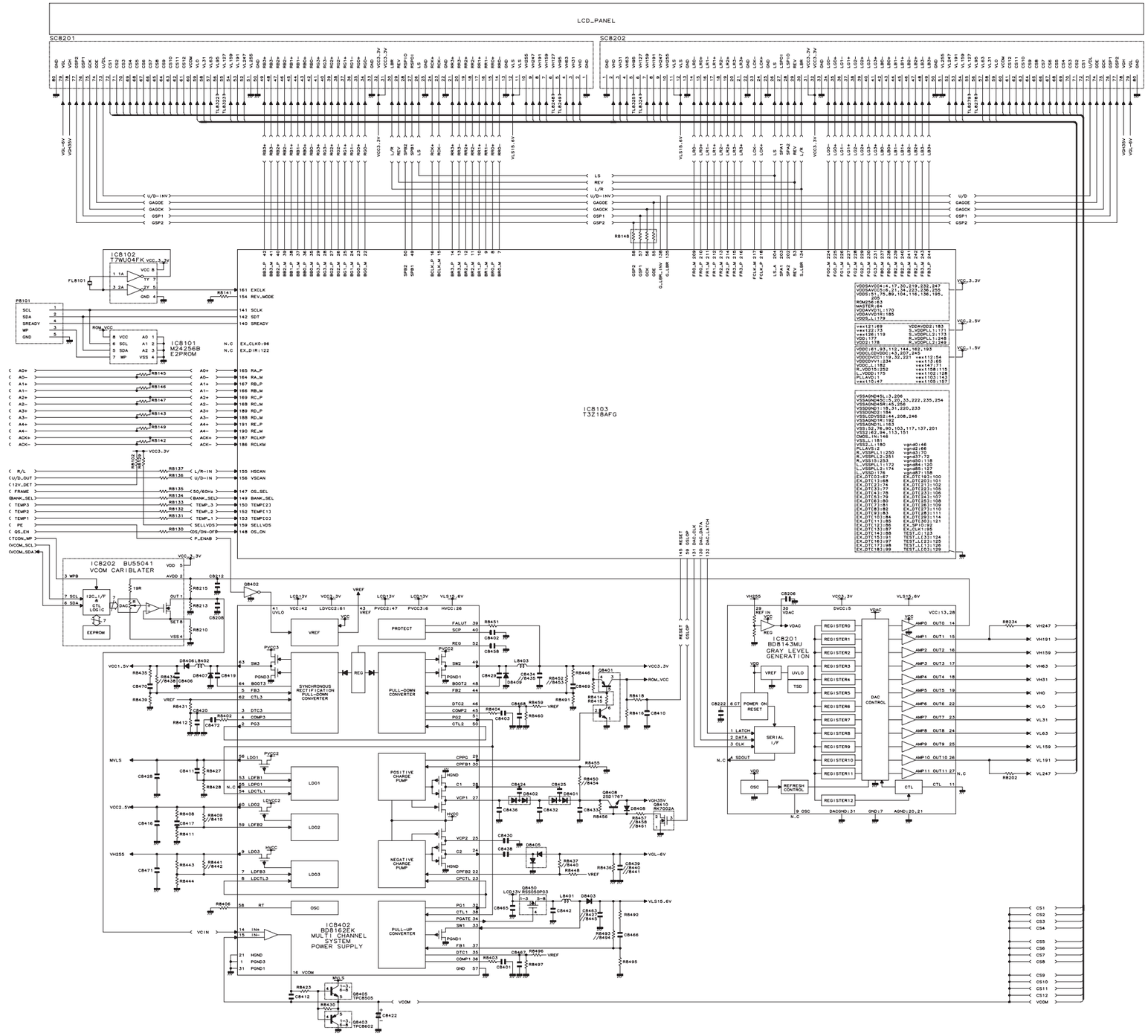
CHAPTER 5. BLOCK DIAGRAM/OVERALL WIRING

[1] BLOCK DIAGRAM

BLOCK DIAGRAM (1/2)

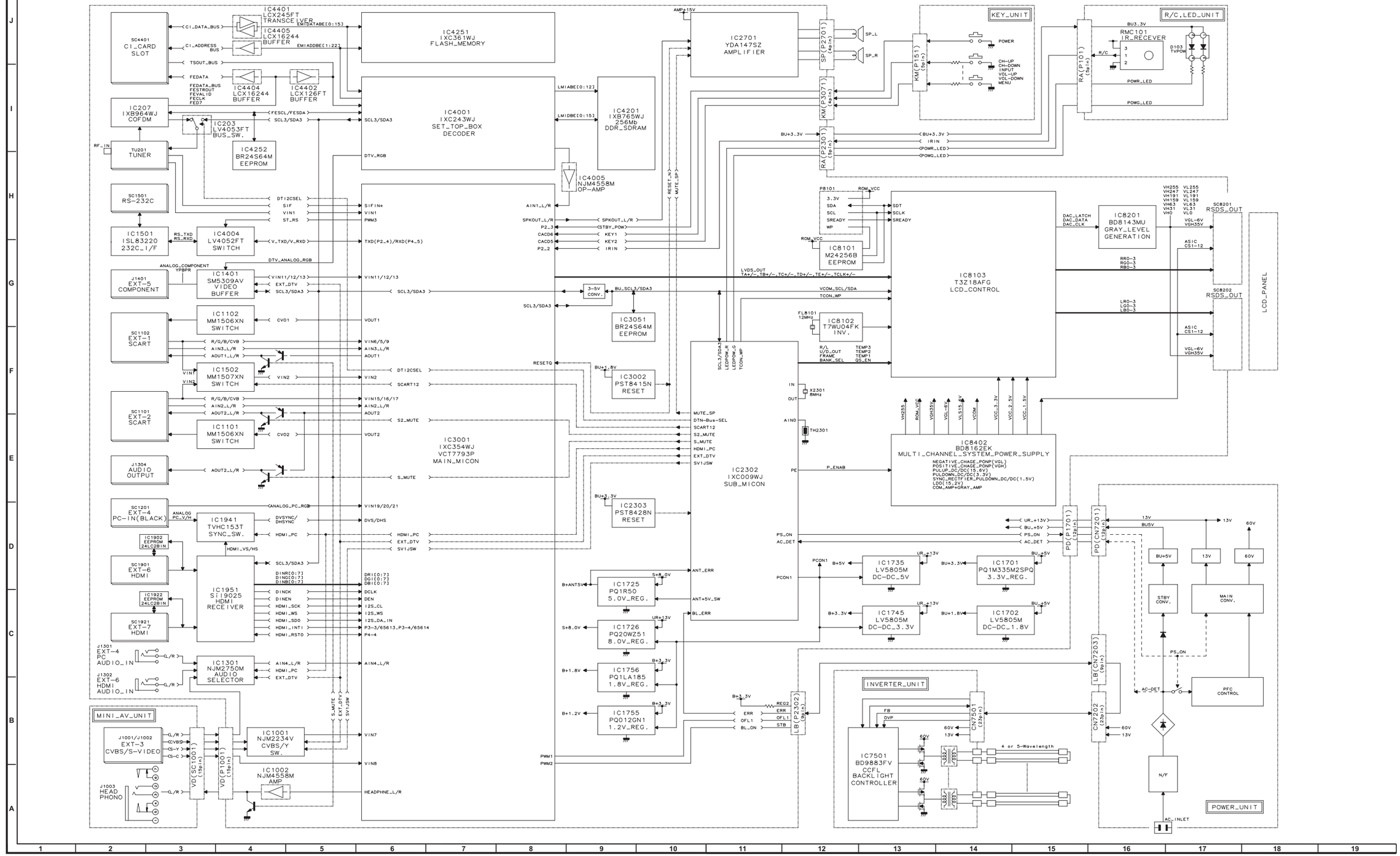


BLOCK DIAGRAM (2/2)



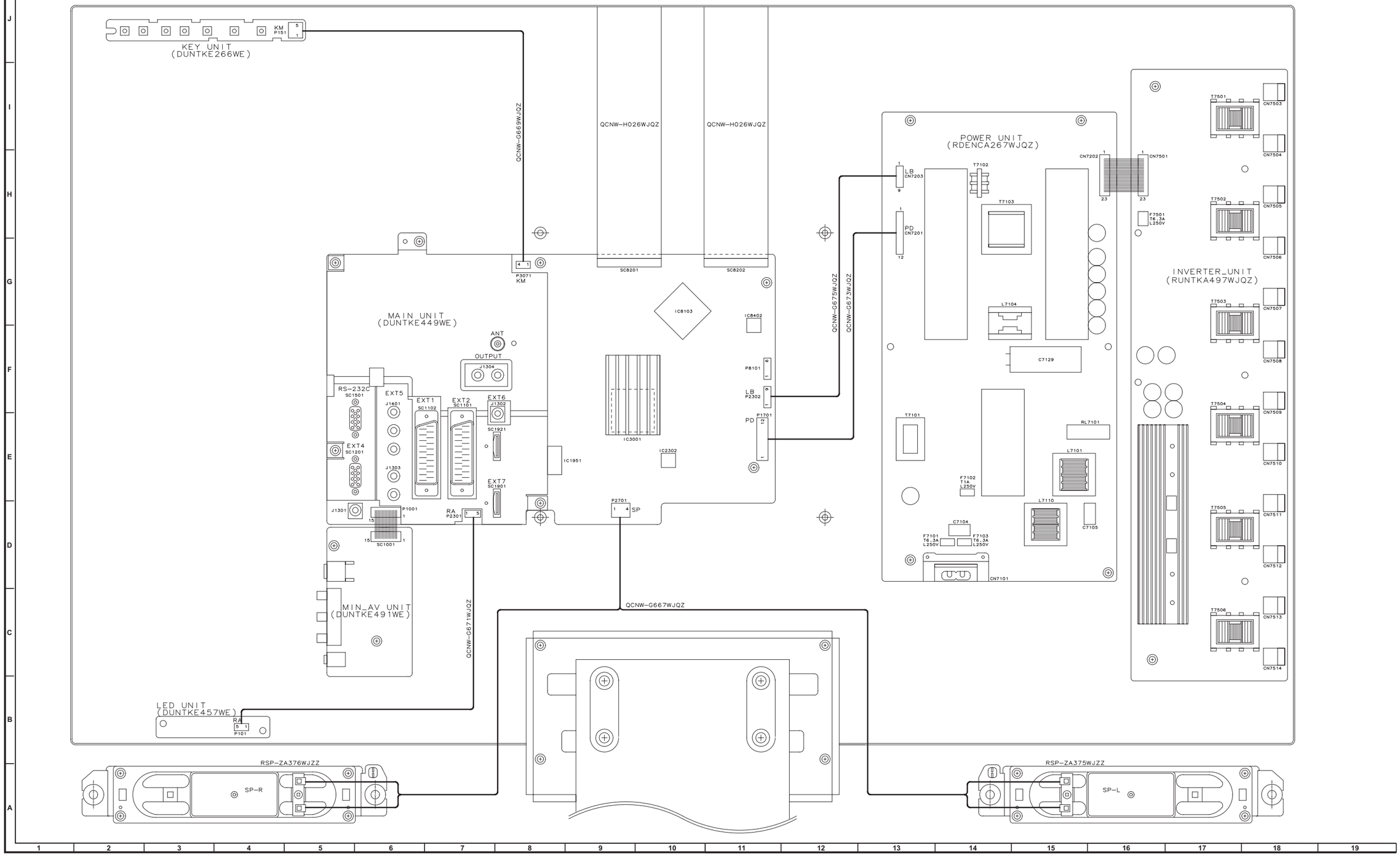
[2] SYSTEM BLOCK DIAGRAM

SYSTEM BLOCK DIAGRAM



[3] OVERALL WIRING DIAGRAM

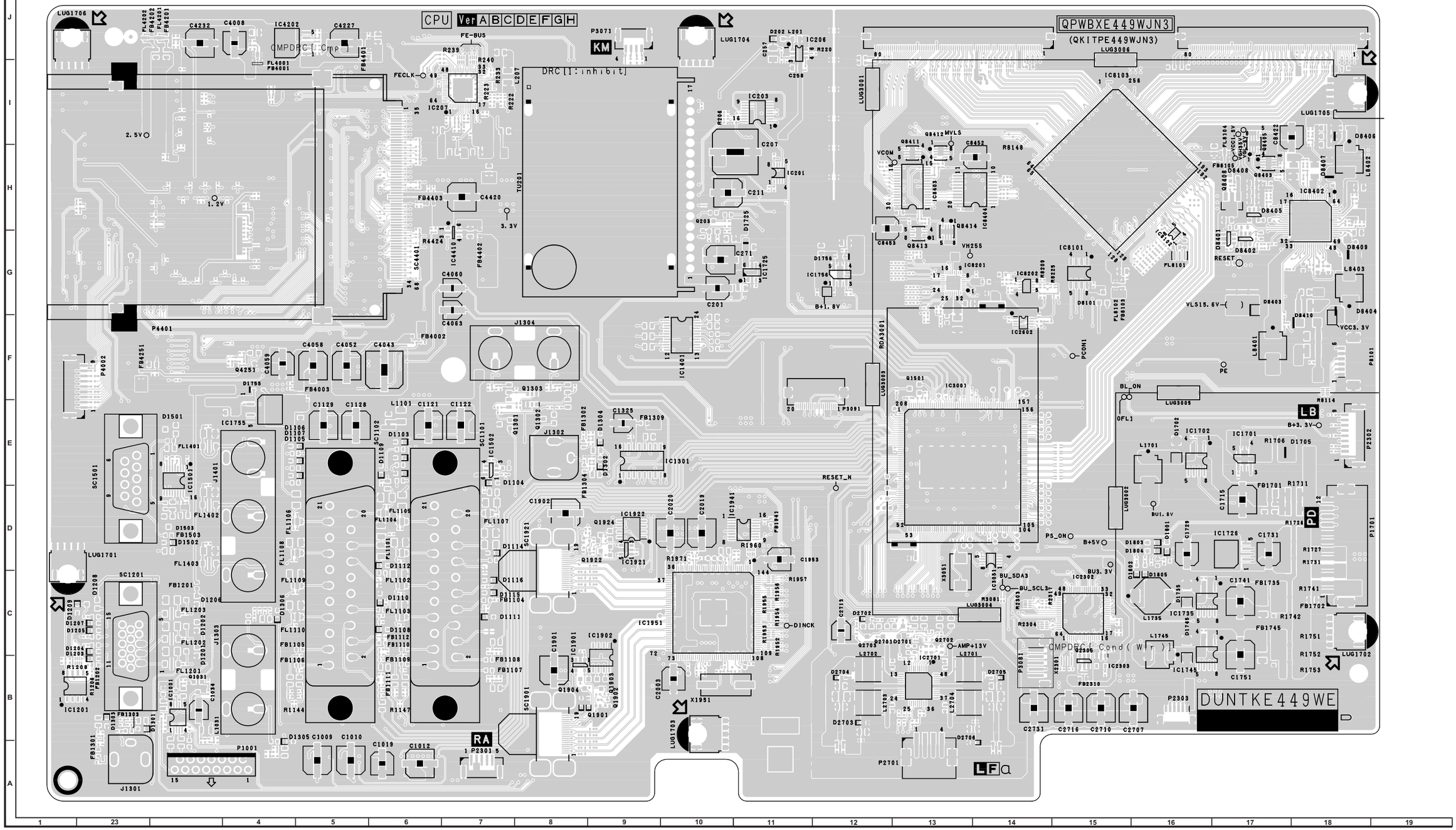
OVERALL WIRING DIAGRAM



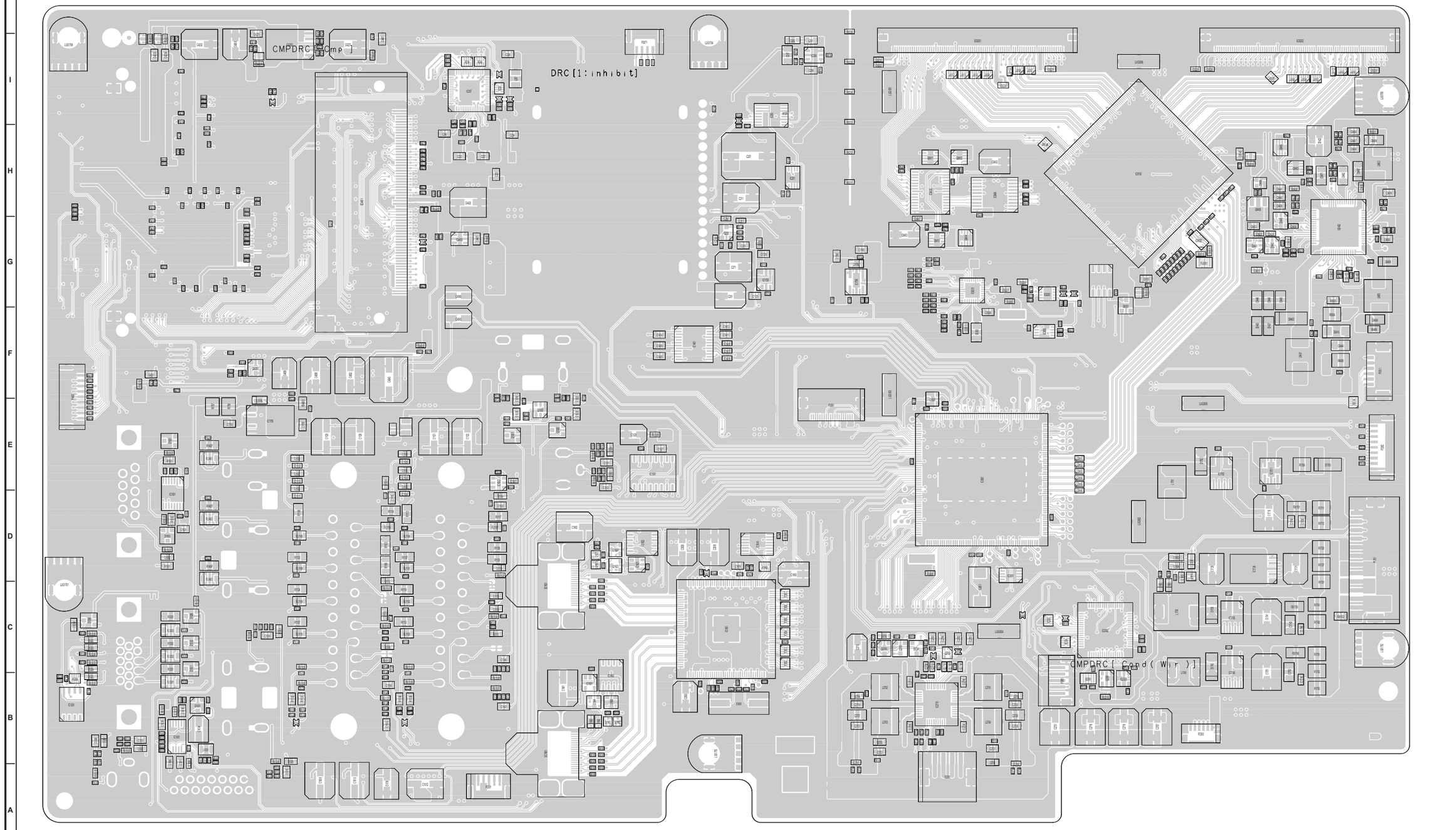
CHAPTER 6. PRINTED WIRING BOARD ASSEMBLIES

[1] MAIN Unit

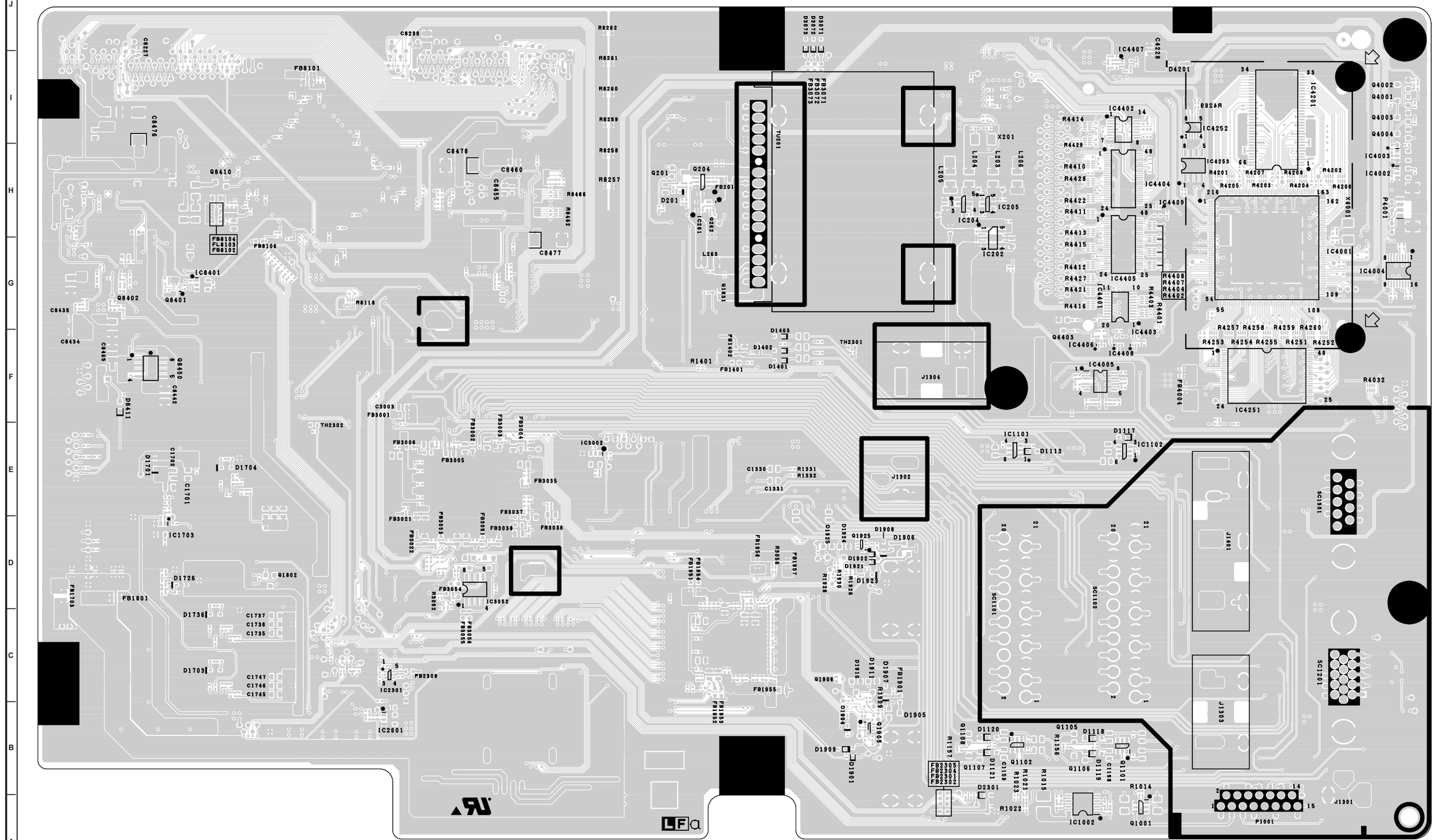
MAIN Unit (Side A)



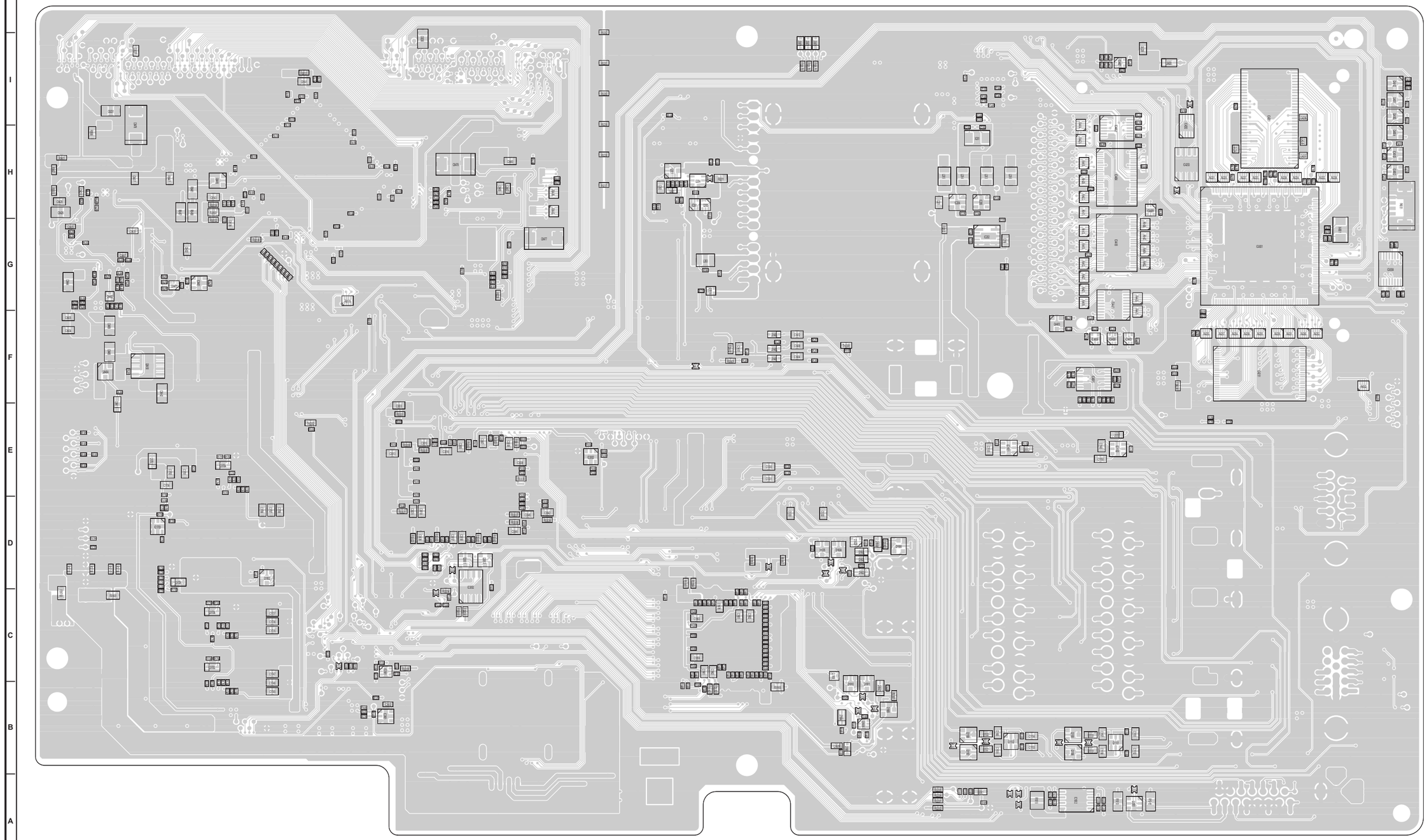
MAIN Unit (Chip Side A)



MAIN Unit (Side B)

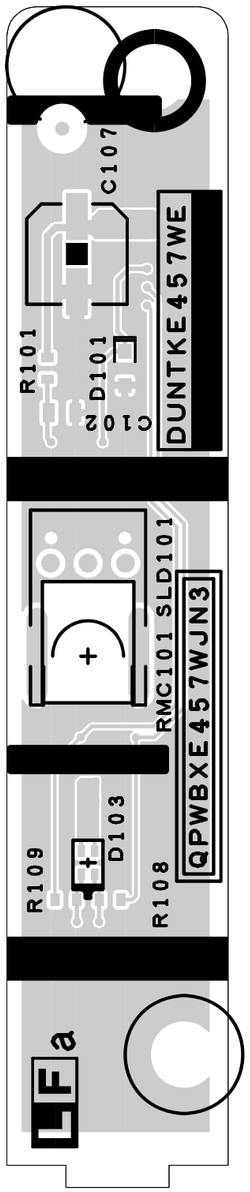


MAIN Unit (Chip Side B)

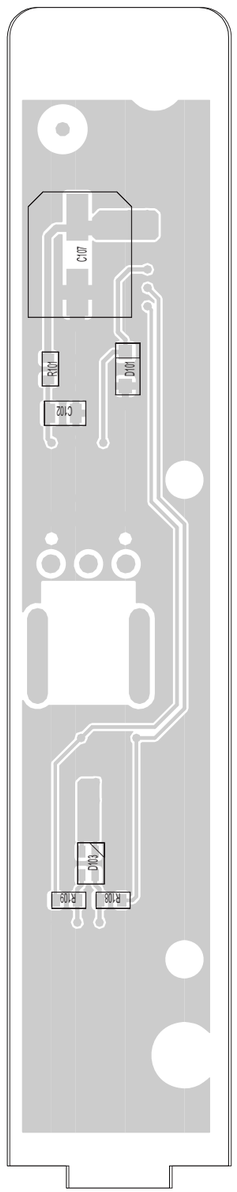


[2] R/C, LED Unit

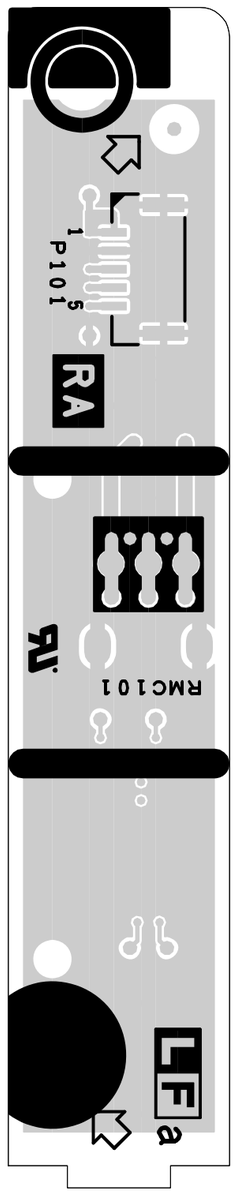
R/C, LED Unit (Side A)



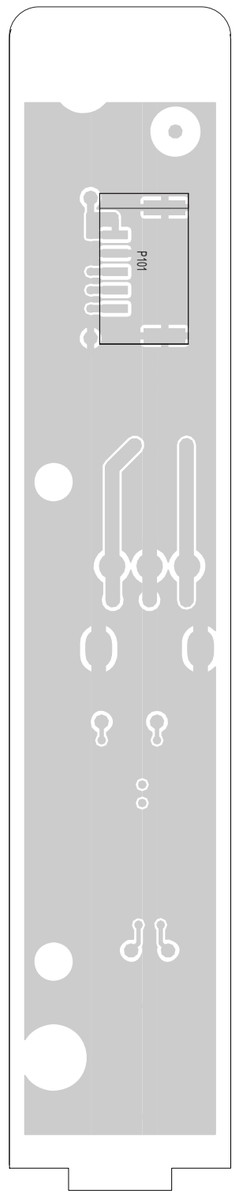
R/C, LED Unit (Chip Side A)



R/C, LED Unit (Side B)

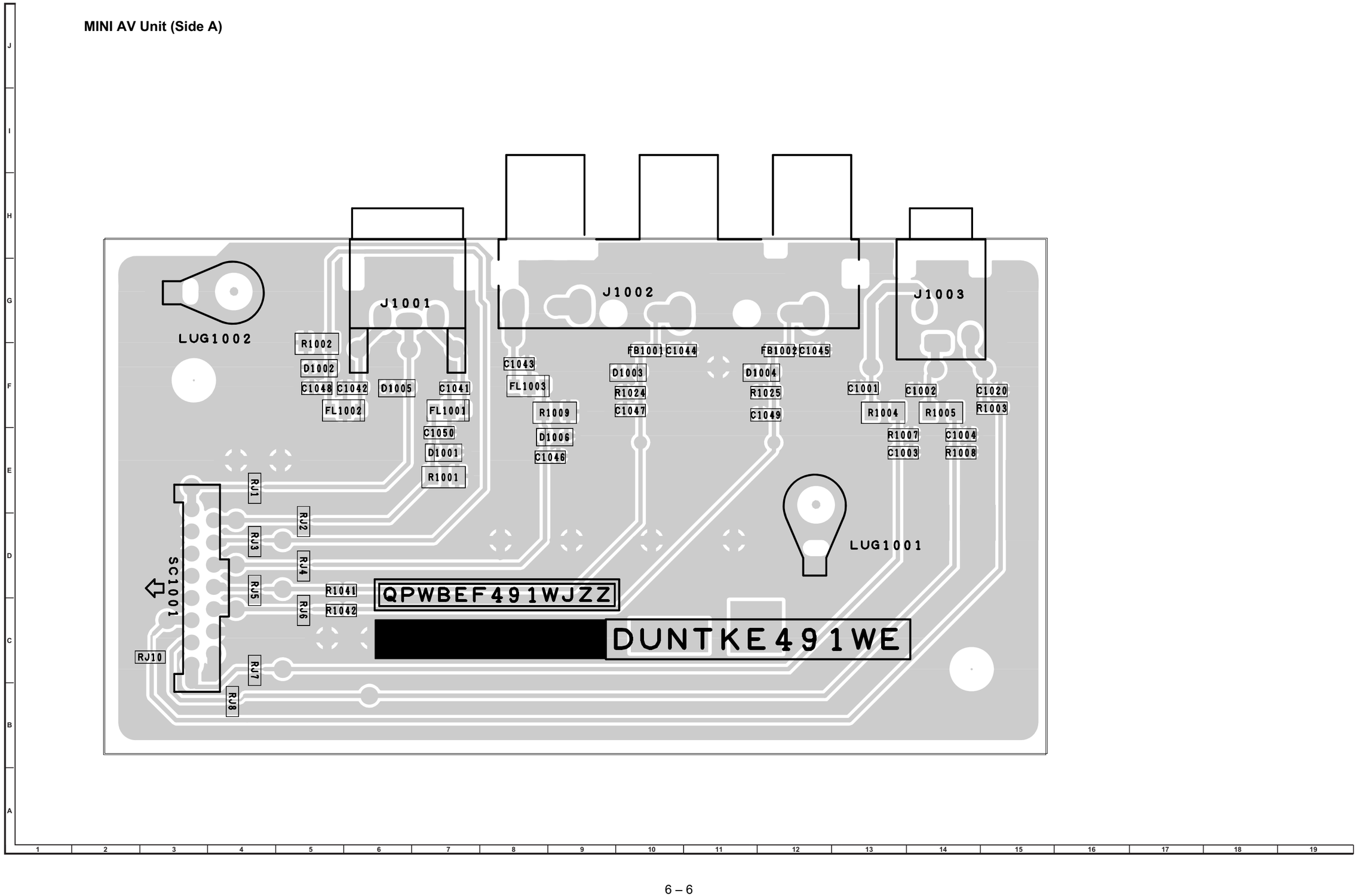


R/C, LED Unit (Chip Side B)



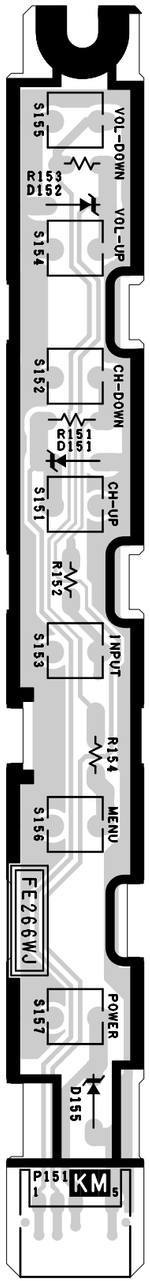
[3] MINI AV Unit

MINI AV Unit (Side A)

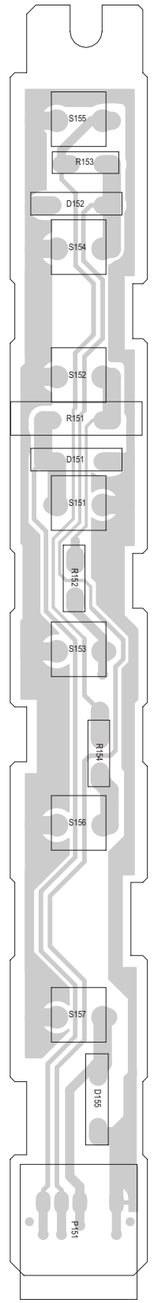


[4] KEY

KEY Unit (Side A)



KEY Unit (Chip Parts Side A)



CHAPTER 7. SCHEMATIC DIAGRAM

[1] DESCRIPTION OF SCHEMATIC DIAGRAM

VOLTAGE MEASUREMENT CONDITION:

1. The voltages at test points are measured on exclusive AC adaptor and the stable supply voltage of AC 230V.
   Signals are fed by a colour bar signal generator for servicing purpose and the above voltages are measured with a 20k ohm/V tester.

INDICATION OF RESISTOR & CAPACITOR:

RESISTOR

1. The unit of resistance "Ω" is omitted.
   (K=kΩ=1000 Ω, M=MΩ).
2. All resistors are ± 5%, unless otherwise noted.
   (K= ± 10%, F= ± 1%, D= ± 0.5%)
3. All resistors are 1/16W, unless otherwise noted.

CAPACITOR

1. All capacitors are μF, unless otherwise noted.
   (P=pF=μμF).
2. All capacitors are 50V, unless otherwise noted.

CAUTION:
This circuit diagram is original one, therefore there may be a slight difference from yours.

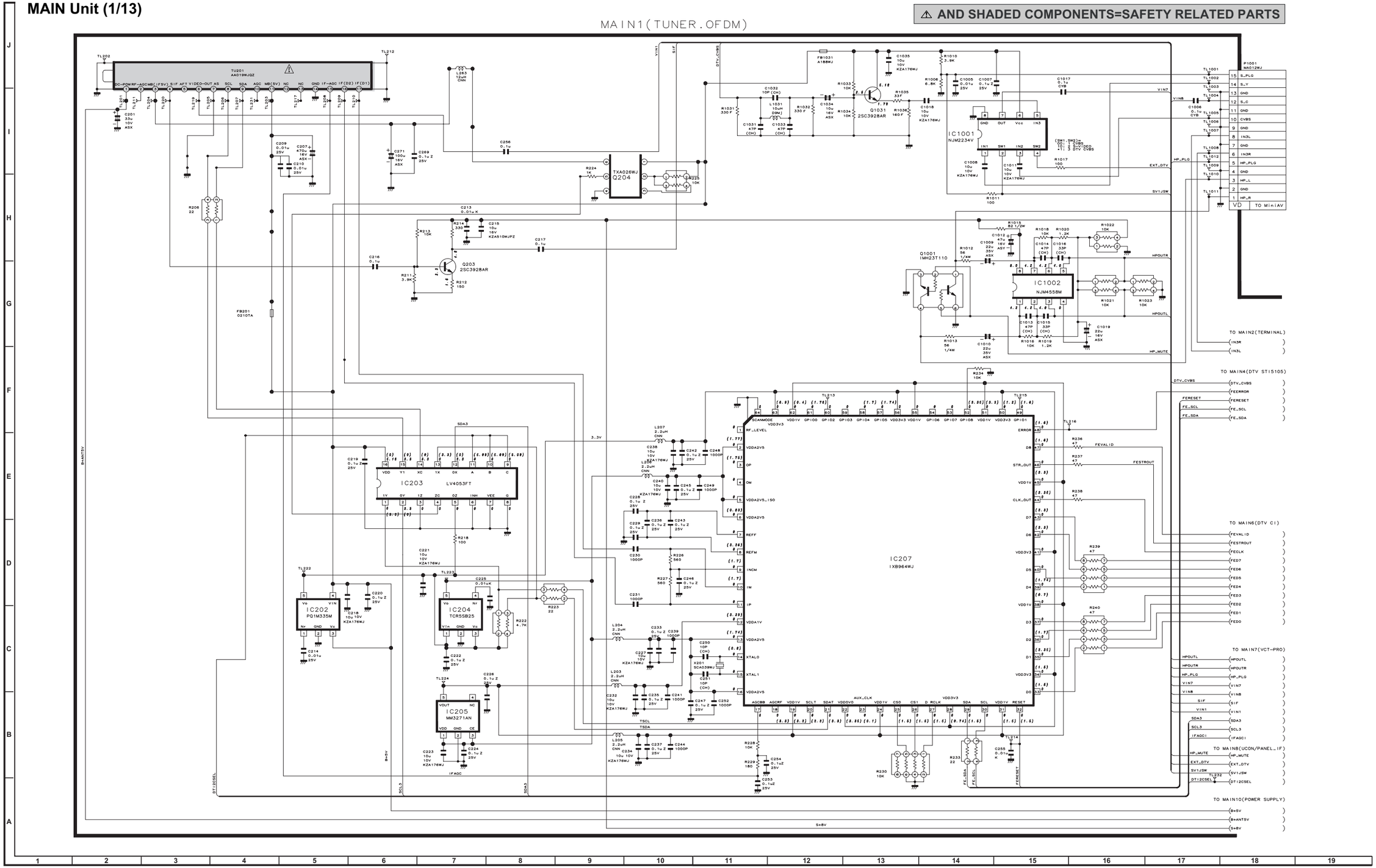
SAFETY NOTES:
1. DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACING PARTS.
2. SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.

IMPORTANT SAFETY NOTICE:
PARTS MARKED WITH " ⚠ " ( ) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.

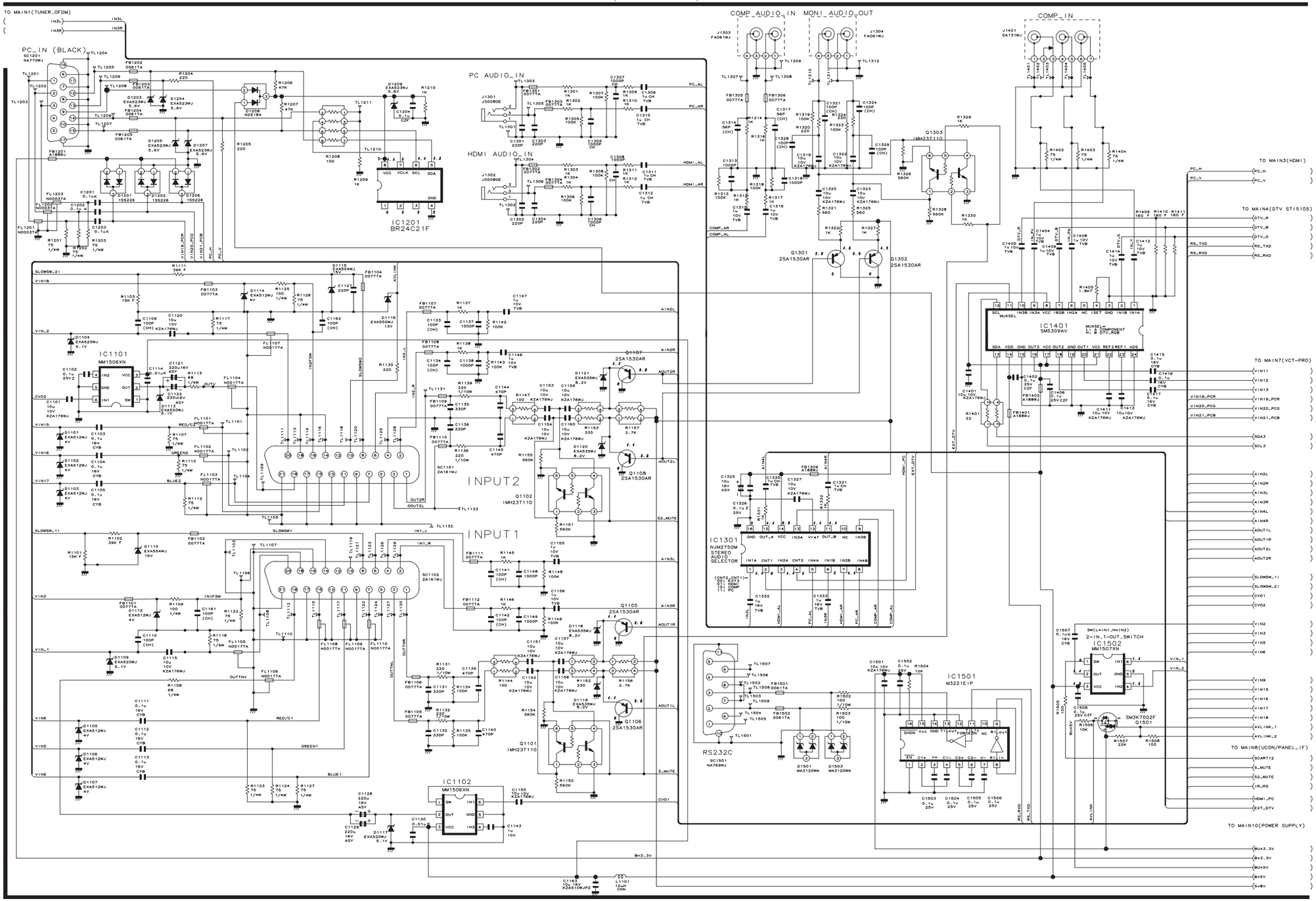
[2] SCHEMATIC DIAGRAM

MAIN Unit (1/13)

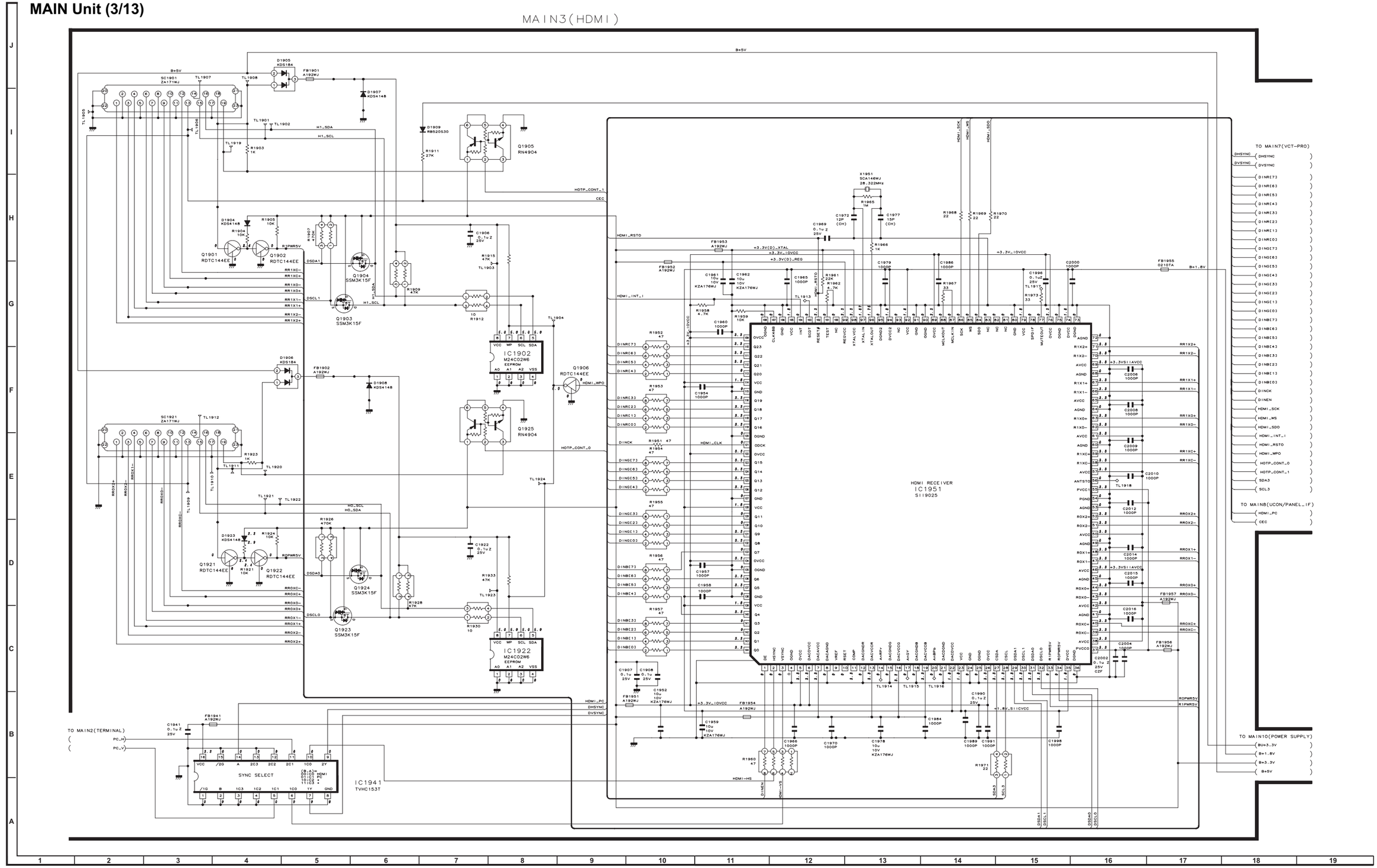
⚠ AND SHADED COMPONENTS=SAFETY RELATED PARTS



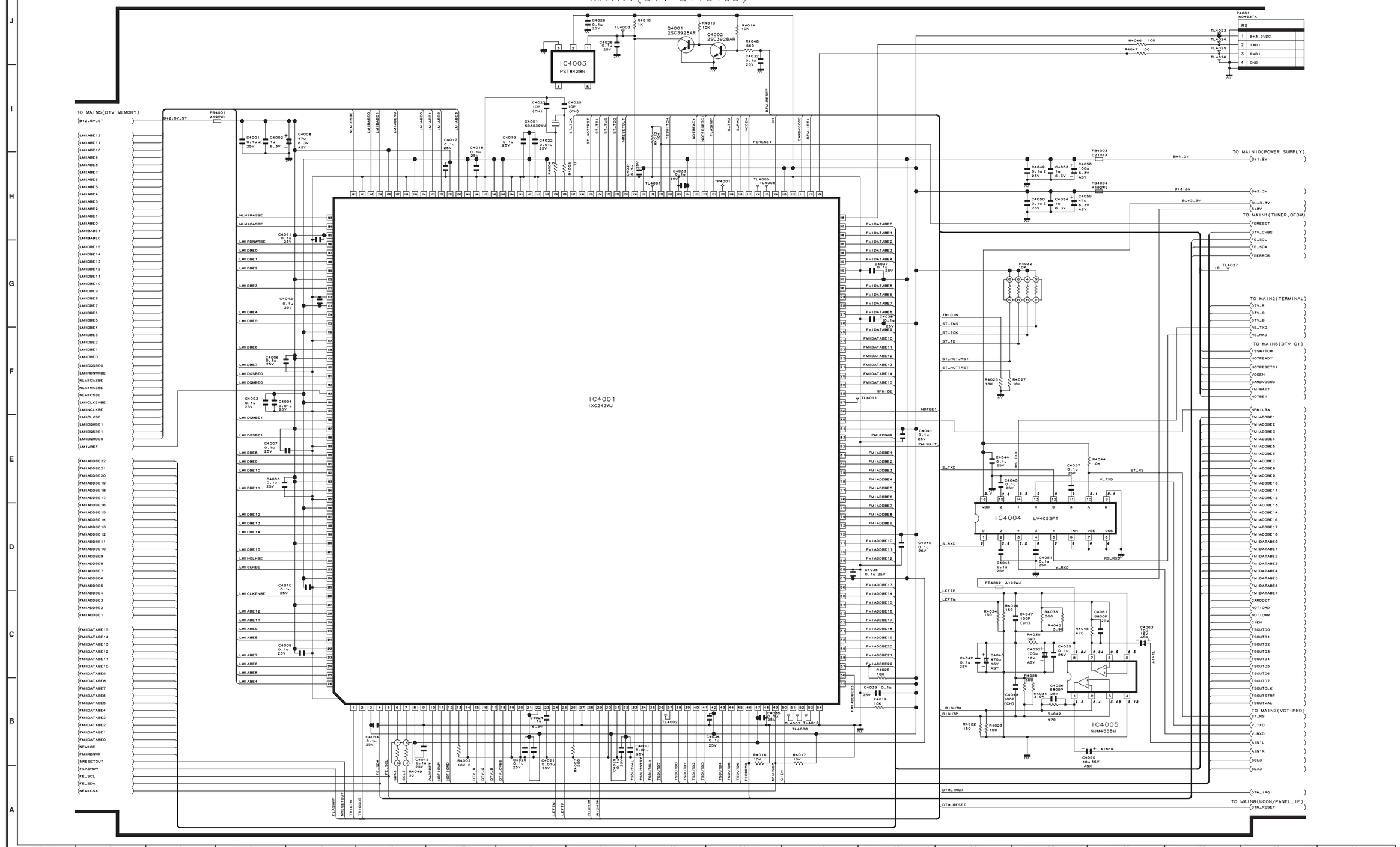
MAIN Unit (2/13)



MAIN Unit (3/13)

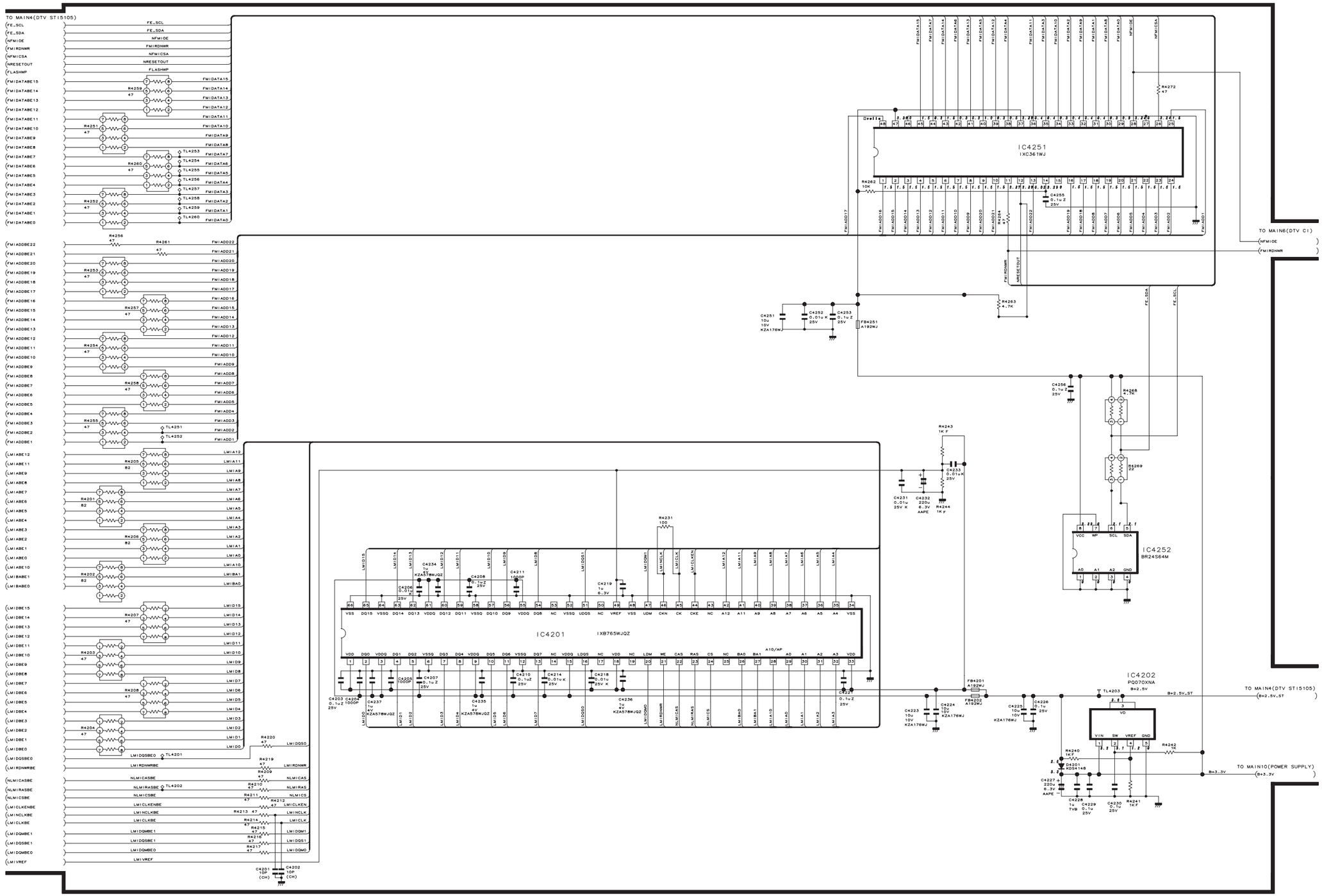


MAIN Unit (4/13)



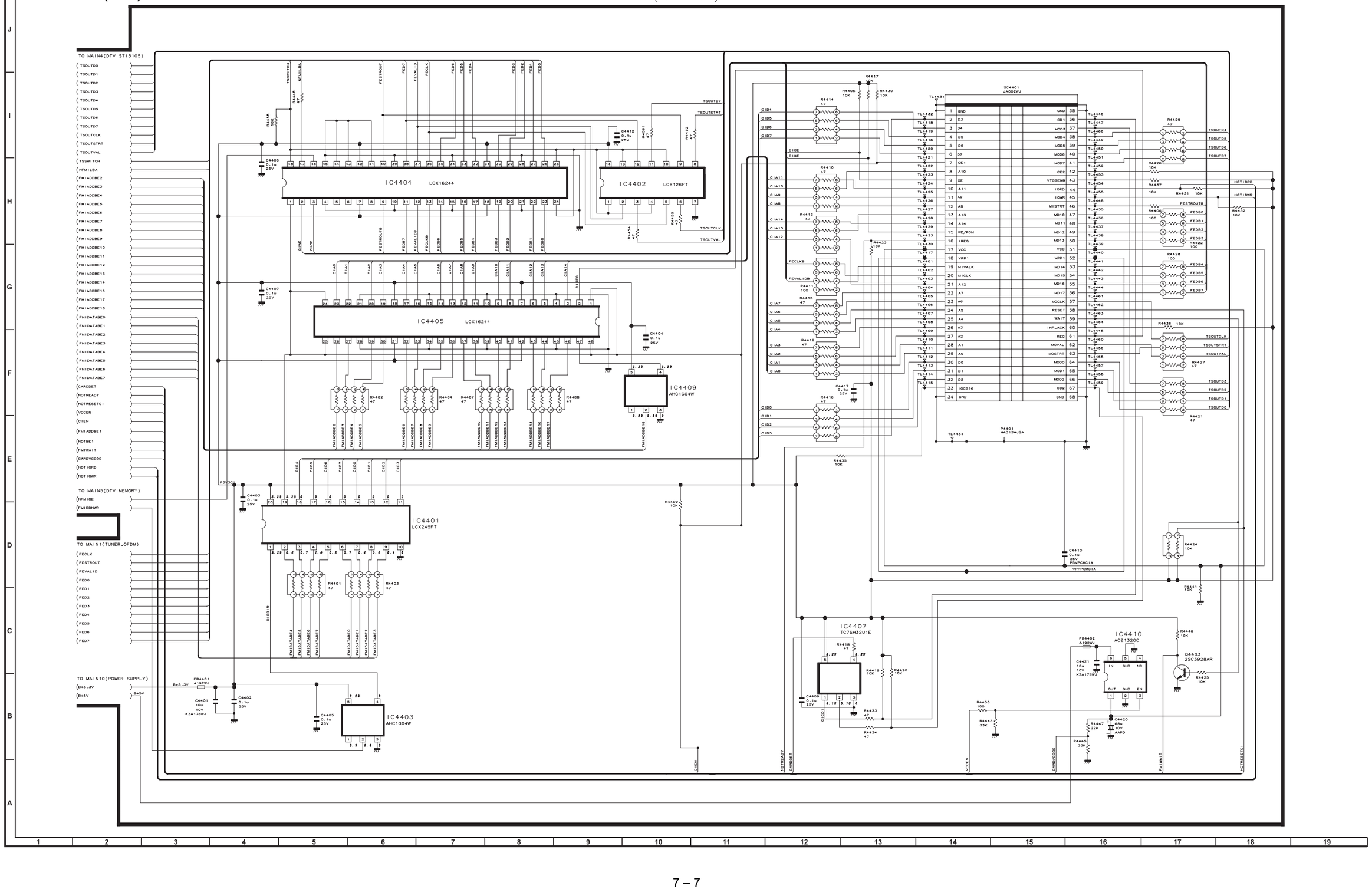
MAIN Unit (5/13)

MAIN5(DTV MEMORY)



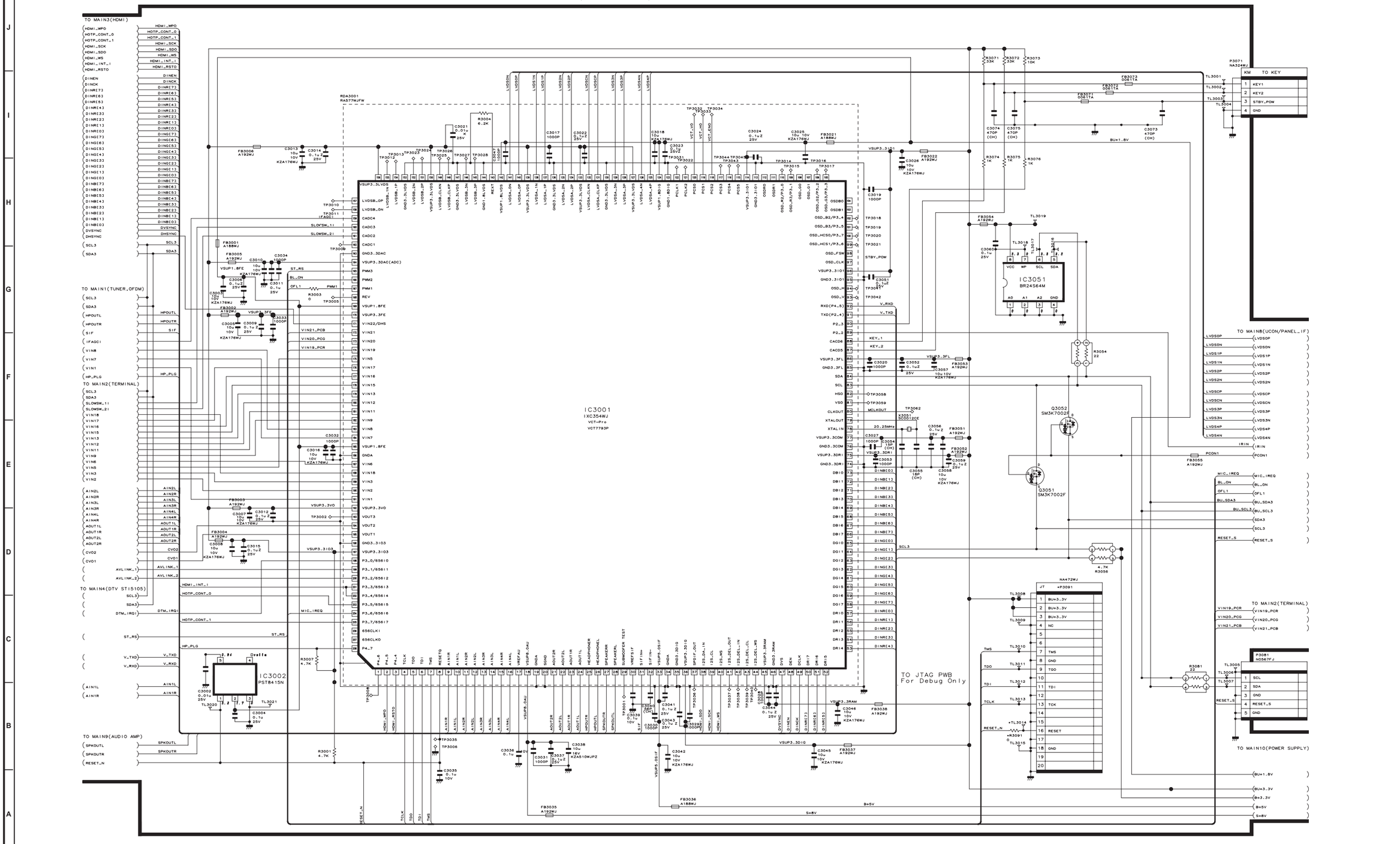
MAIN Unit (6/13)

MAIN6(DTV CI)

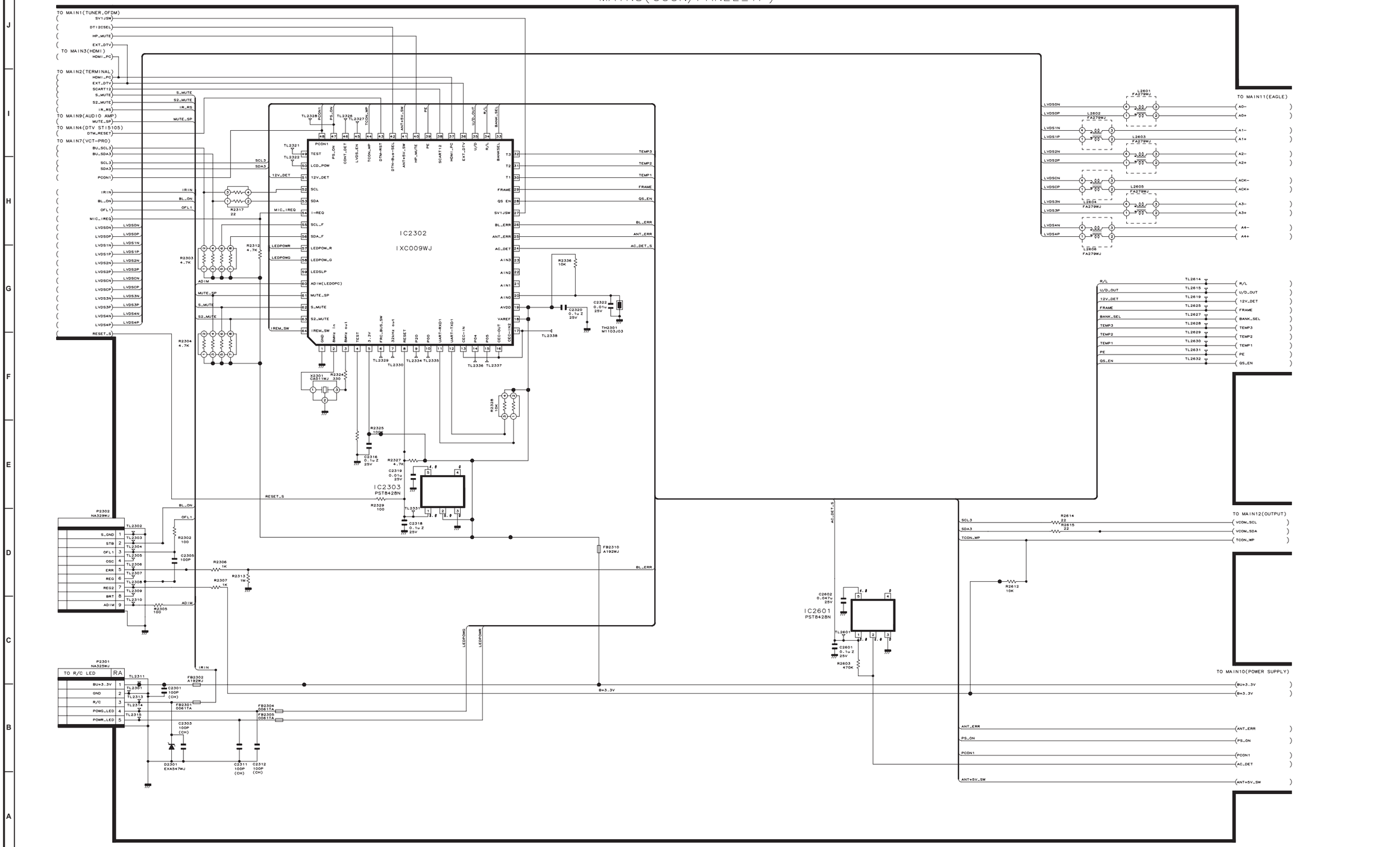


MAIN Unit (7/13)

MAIN7(VCT-PRO)

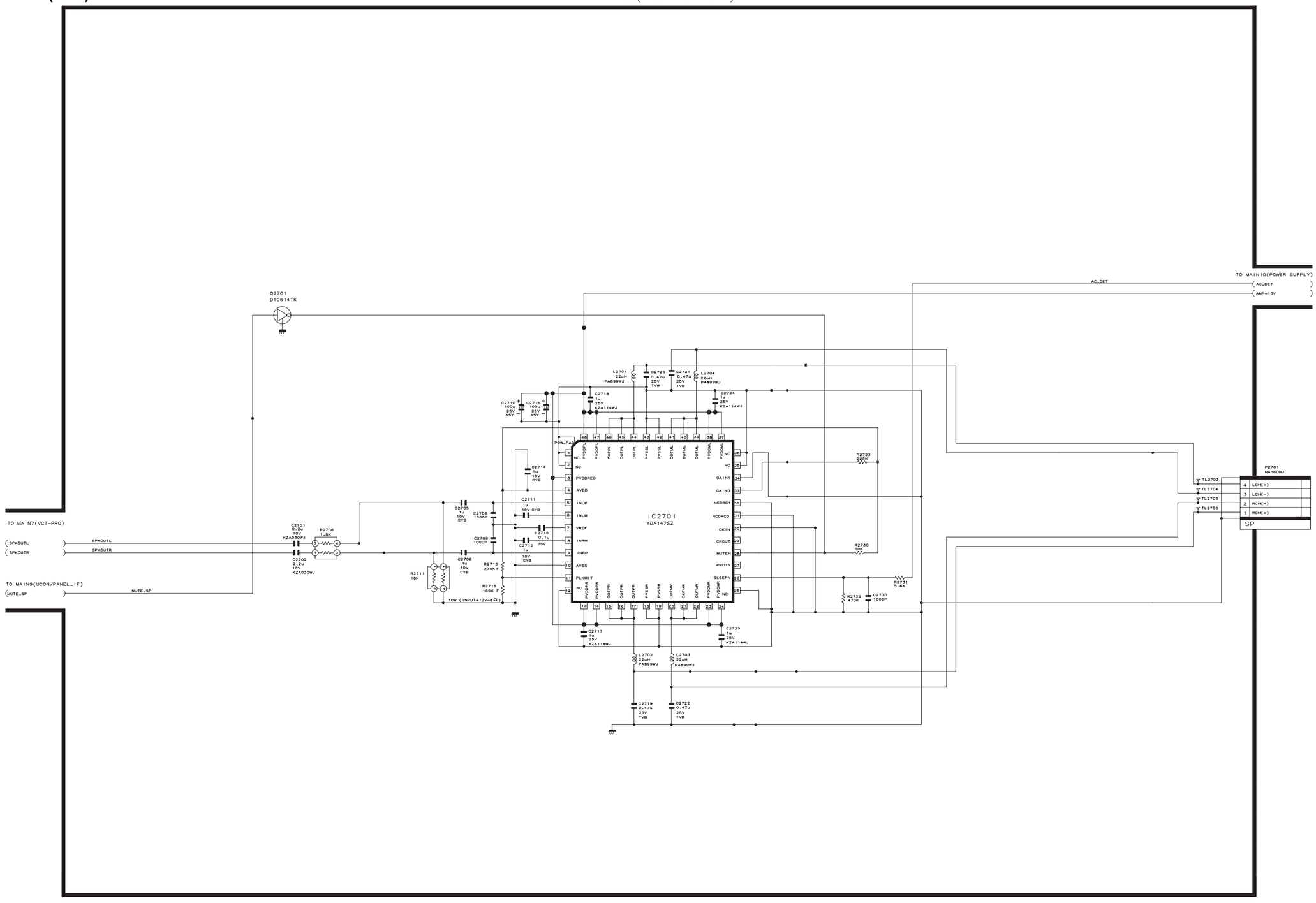


MAIN Unit (8/13)

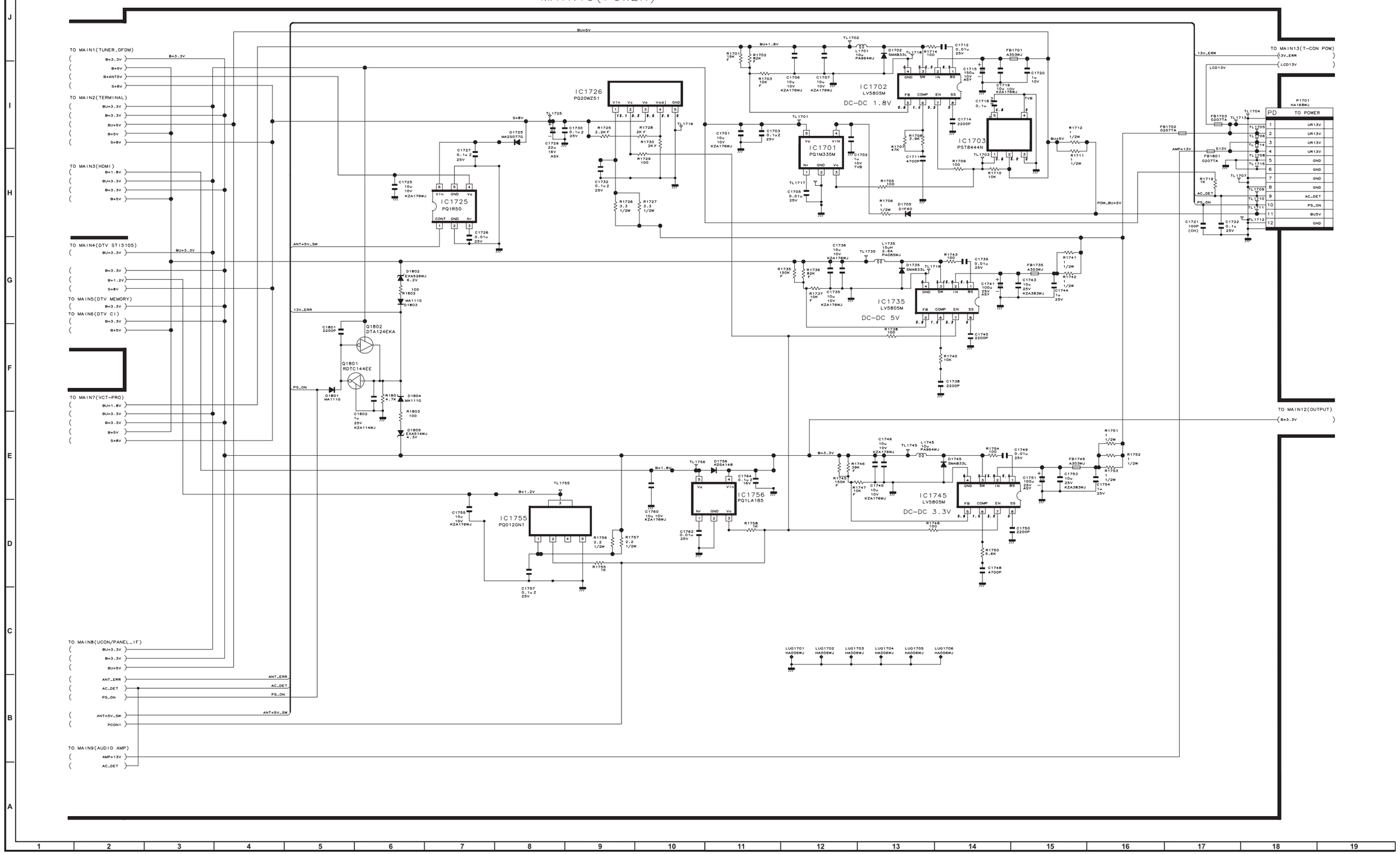


MAIN Unit (9/13)

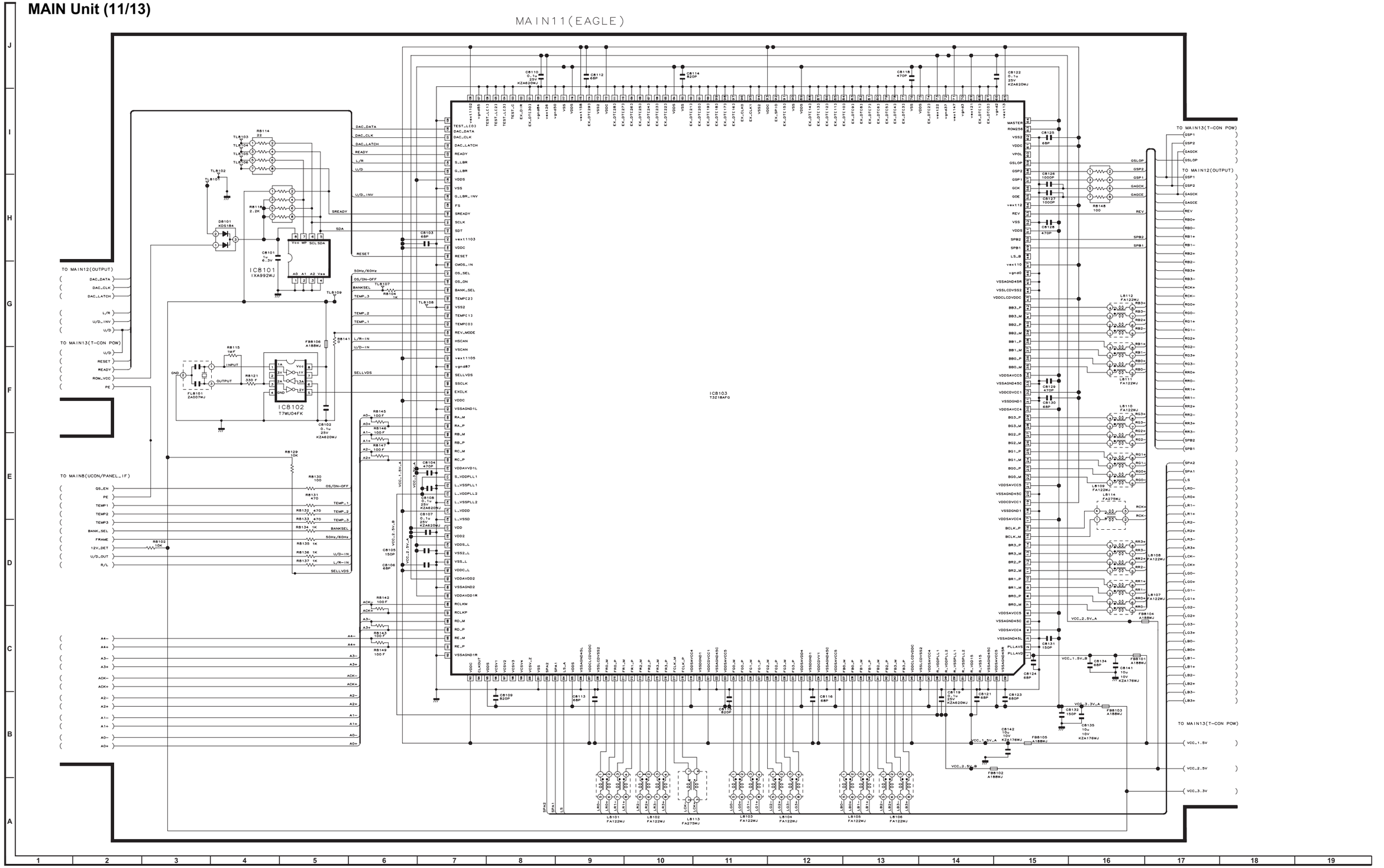
MAIN9(AUDIO AMP)



MAIN Unit (10/13)

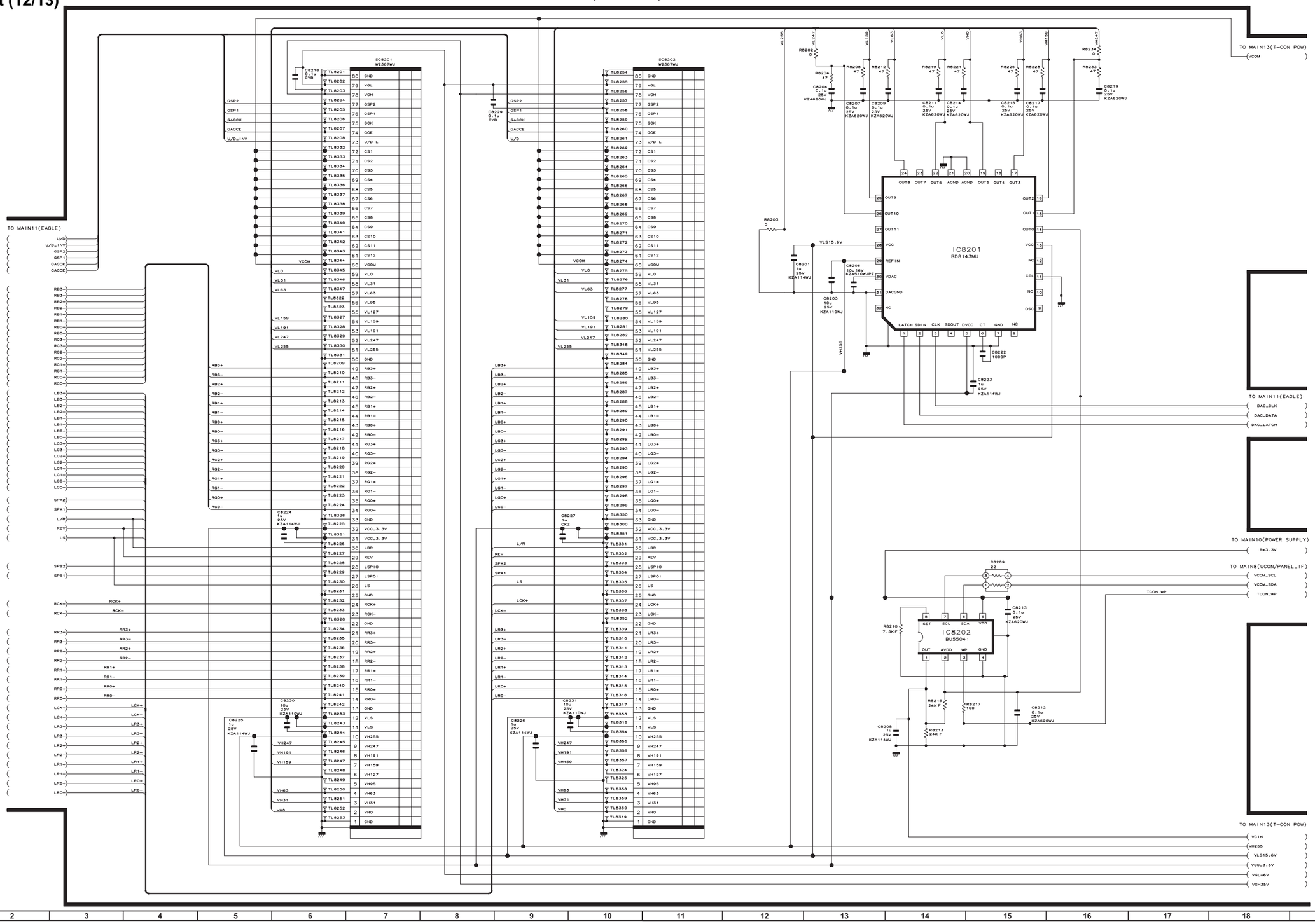


MAIN Unit (11/13)

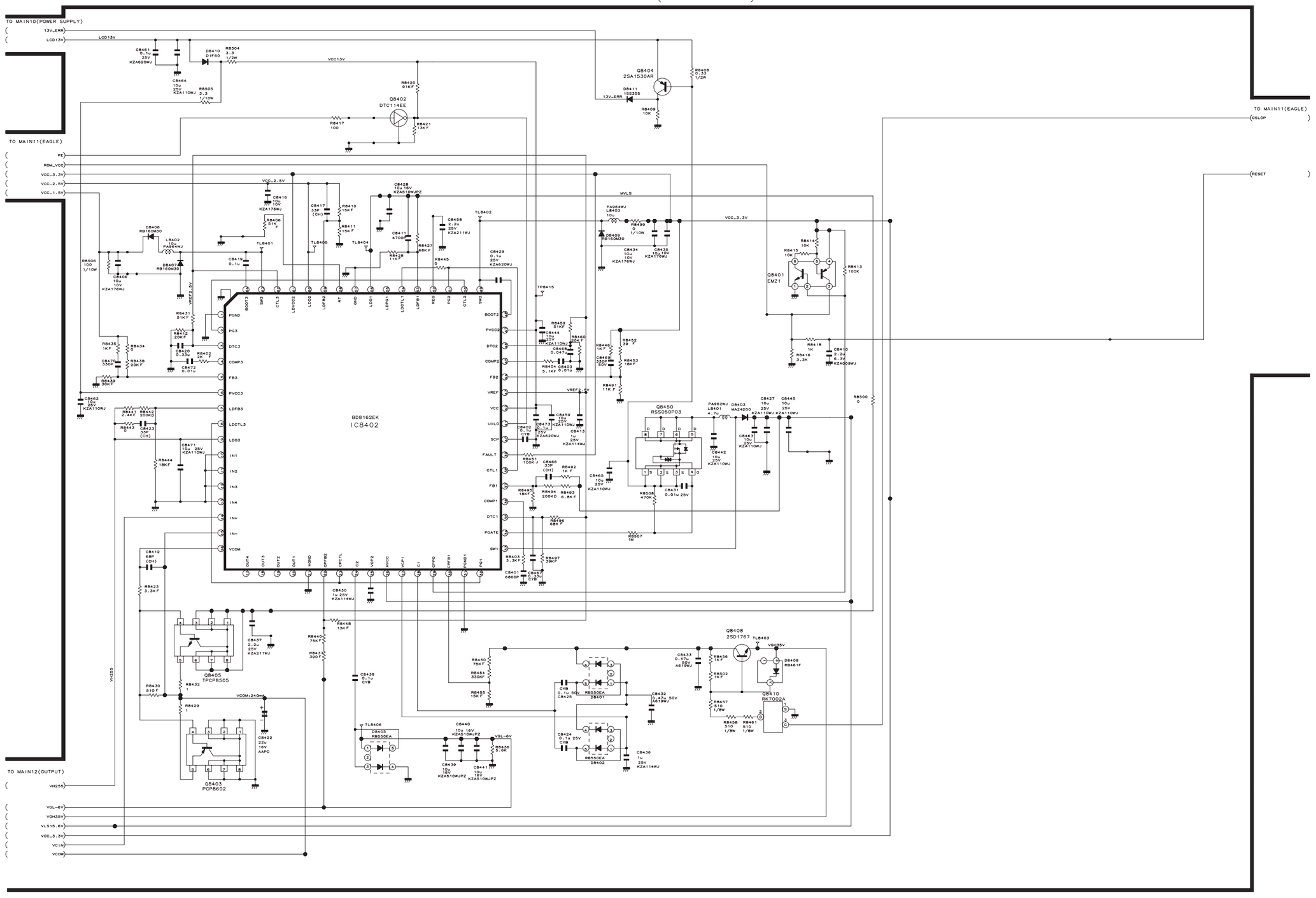


MAIN Unit (12/13)

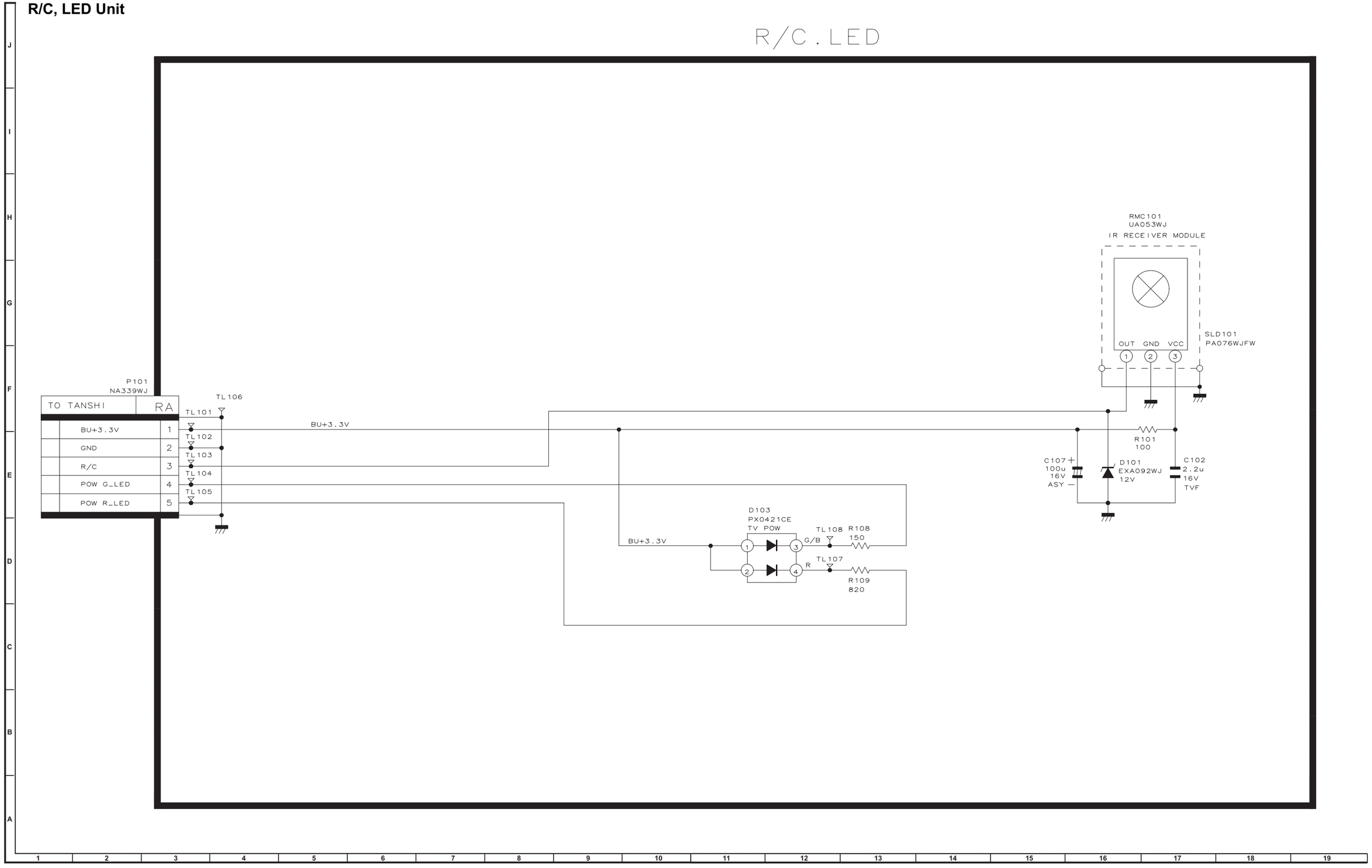
MAIN12(OUTPUT)



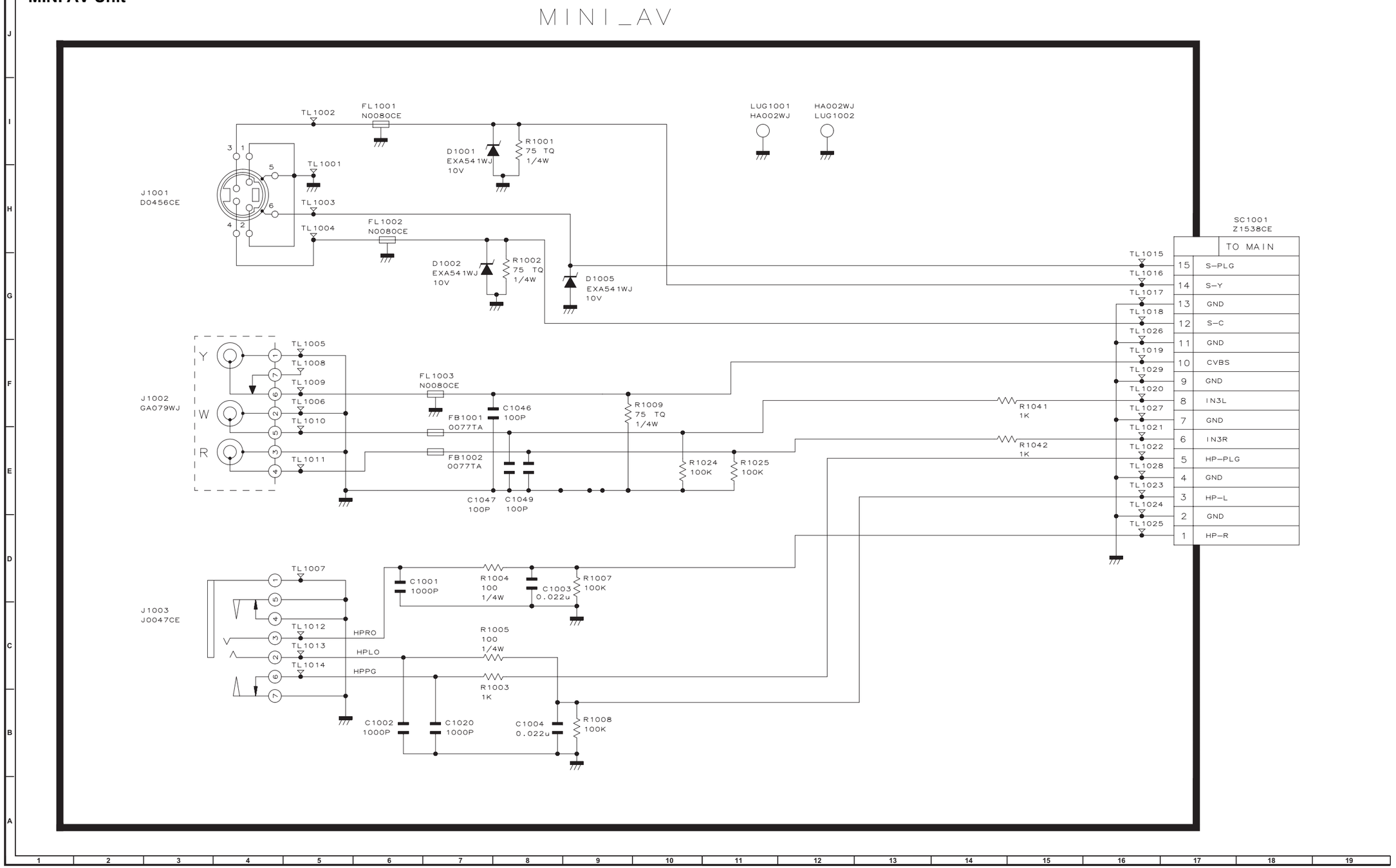
MAIN Unit (13/13)



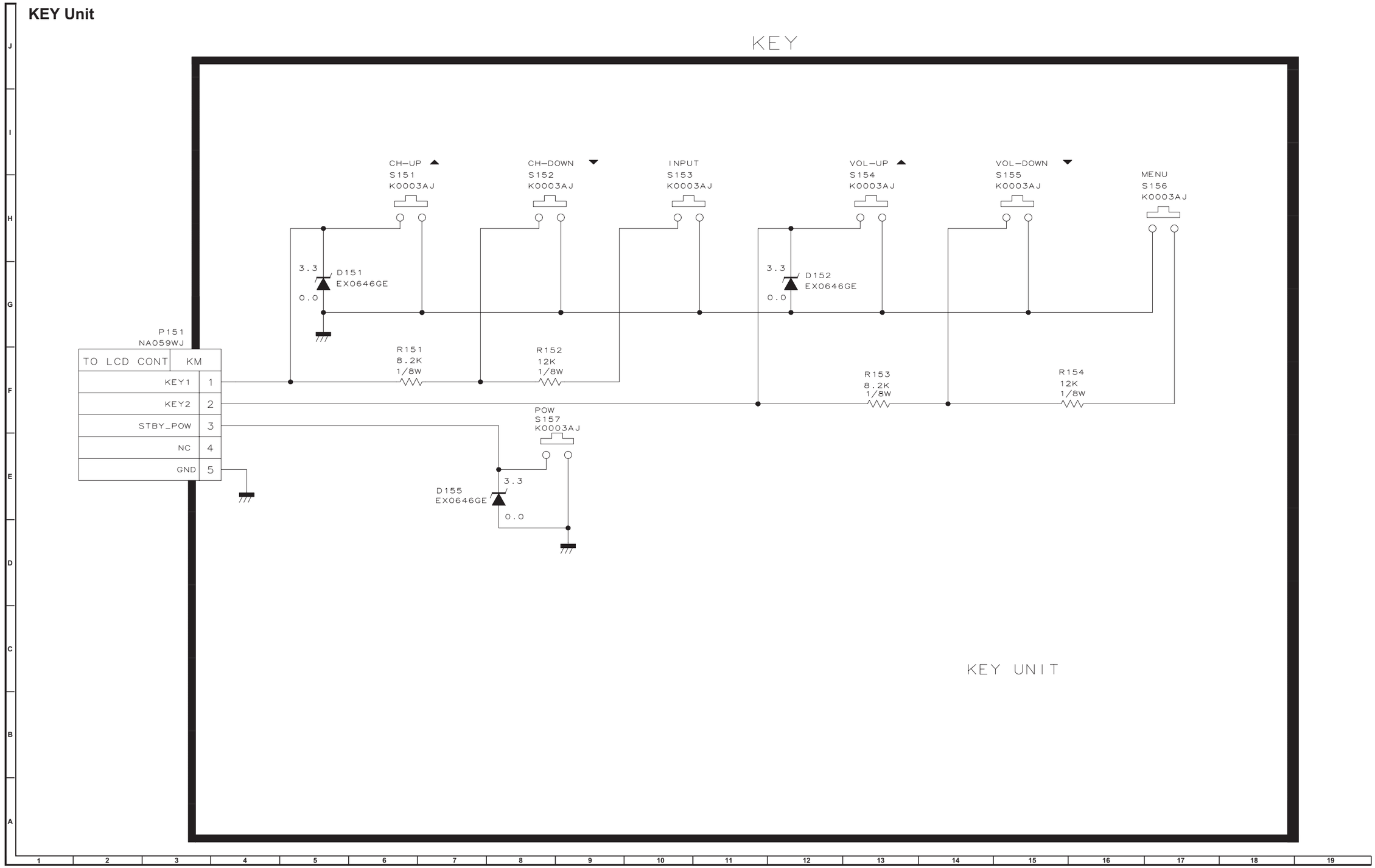
R/C, LED Unit


R/C.LED
P101
NA339WJ
TO TANSHI
RA
BU+3.3V 1
GND 2
R/C 3
POW G_LED 4
POW R_LED 5
TL101
TL102
TL103
TL104
TL105
TL106
BU+3.3V
RMC101
UA053WJ
IR RECEIVER MODULE
OUT GND VCC
1 2 3
SLD101
PA076WJFW
R101
100
C107
100u
16V
ASY
D101
EXA092WJ
12V
C102
2.2u
16V
TVF
D103
PX0421CE
TV POW
BU+3.3V
TL108
G/B
R108
150
TL107
R
R109
820

MINI AV Unit


MINI_AV
TL1002
FL1001
N0080CE
LUG1001
HA002WJ
HA002WJ
LUG1002
D1001
EXA541WJ
10V
R1001
75 TQ
1/4W
TL1001
J1001
D0456CE
TL1003
TL1004
FL1002
N0080CE
D1002
EXA541WJ
10V
R1002
75 TQ
1/4W
D1005
EXA541WJ
10V
SC1001
Z1538CE
TO MAIN
TL1015
TL1016
TL1017
TL1018
TL1026
TL1019
TL1029
TL1020
TL1027
TL1021
TL1022
TL1028
TL1023
TL1024
TL1025
15 S-PLG
14 S-Y
13 GND
12 S-C
11 GND
10 CVBS
9 GND
8 IN3L
7 GND
6 IN3R
5 HP-PLG
4 GND
3 HP-L
2 GND
1 HP-R
J1002
GA079WJ
Y
W
R
TL1005
TL1008
TL1009
TL1006
TL1010
TL1011
FL1003
N0080CE
FB1001
0077TA
FB1002
0077TA
C1046
100P
C1047
100P
C1049
100P
R1009
75 TQ
1/4W
R1024
100K
R1025
100K
R1041
1K
R1042
1K
J1003
J0047CE
TL1007
TL1012
TL1013
TL1014
HPRO
HPLO
HPPG
C1001
1000P
R1004
100
1/4W
C1003
0.022u
R1007
100K
R1005
100
1/4W
R1003
1K
C1002
1000P
C1020
1000P
C1004
0.022u
R1008
100K

KEY Unit


KEY
CH-UP
S151
K0003AJ
CH-DOWN
S152
K0003AJ
INPUT
S153
K0003AJ
VOL-UP
S154
K0003AJ
VOL-DOWN
S155
K0003AJ
MENU
S156
K0003AJ
3.3
D151
EX0646GE
0.0
3.3
D152
EX0646GE
0.0
P151
NA059WJ
TO LCD CONT
KM
KEY1 1
KEY2 2
STBY_POW 3
NC 4
GND 5
R151
8.2K
1/8W
R152
12K
1/8W
R153
8.2K
1/8W
R154
12K
1/8W
POW
S157
K0003AJ
3.3
D155
EX0646GE
0.0
KEY UNIT

SHARP PARTS GUIDE

No. S88N6LC37D44E

LCD COLOUR TELEVISION

MODELS LC-37D44E/S/RU-BK/GY

CONTENTS

[1] PRINTED WIRING BOARD ASSEMBLIES

[2] LCD PANEL

[3] DUNTKE449FM03 (MAIN Unit)

[4] DUNTKE457FM03 (R/C, LED Unit)

[5] DUNTKE266FM01 (KEY Unit)

[6] DUNTKE491FM01 (MINI-AV Unit)

[7] CABINET PARTS

[8] LCD MODULE ASSEMBLY

[9] SUPPLIED ACCESSORIES

[10] PACKING PARTS

[11] SERVICE JIGS

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[1] PRINTED WIRING BOARD ASSEMBLIES					
N	DUNTKE449FM03	CP	N	R	MAIN Unit
N	DUNTKE457FM03	AQ	N	R	R/C, LED Unit
N	DUNTKE266FM01	AR	N	R	KEY Unit
N	DUNTKE491FM01	AY	N	R	MINI-AV Unit
N	RDENCA267WJQZ	BM	N	P	POWER Unit
N	RUNTKA497WJQZ	BH	N	P	INVERTER Unit
[2] LCD PANEL					
N	R1LK370T3GW2AY	EC	N	J	37" LCD Panel Module
[3] DUNTKE449FM03 (MAIN Unit)					
C201	VCEASX1AN336MY	AC		J	Capacitor 33 10V Electrolytic
C207	VCEASX1CN477MY	AE		J	Capacitor 470 16V Electrolytic
C209	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C210	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C213	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C214	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C215	RC-KZA510WJPZY	AB		J	Capacitor 10 16V Ceramic
C216	VCKYCY1HB104KY	AA		J	Capacitor 0.1 50V Ceramic
C217	VCKYCY1HB104KY	AA		J	Capacitor 0.1 50V Ceramic
C218	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C219	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C220	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C221	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C222	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C223	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C224	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C225	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C226	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C227	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C228	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C229	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C230	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C231	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C232	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C233	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C234	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C235	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C236	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C237	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C238	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C239	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C240	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C241	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C242	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C243	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C244	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C245	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C246	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C247	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C248	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C249	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C250	VCCCCZ1HH100DY	AB		J	Capacitor 10p 50V Ceramic
C251	VCCCCZ1HH100DY	AB		J	Capacitor 10p 50V Ceramic
C252	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C253	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C254	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C255	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C256	VCKYCY1HB104KY	AA		J	Capacitor 0.1 50V Ceramic
C269	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C271	VCEASX1CN107MY	AC		J	Capacitor 100 16V Electrolytic
C1005	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C1006	VCKYCY1HB104KY	AA		J	Capacitor 0.1 50V Ceramic
C1007	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1008	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1009	VCEASX1VN226MY	AC		J	Capacitor 22 35V Electrolytic
C1010	VCEASX1VN226MY	AC		J	Capacitor 22 35V Electrolytic
C1011	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1012	VCEASY1CN476MY	AC		J	Capacitor 47 16V Electrolytic
C1013	VCCCCZ1HH470JY	AB		J	Capacitor 47p 50V Ceramic
C1014	VCCCCZ1HH470JY	AB		J	Capacitor 47p 50V Ceramic
C1015	VCCCCZ1HH330JY	AB		J	Capacitor 33p 50V Ceramic
C1016	VCCCCZ1HH330JY	AB		J	Capacitor 33p 50V Ceramic
C1017	VCKYCY1HB104KY	AA		J	Capacitor 0.1 50V Ceramic
C1018	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1019	VCEASX1CN226MY	AC		J	Capacitor 22 16V Electrolytic
C1031	VCCCCZ1HH470JY	AB		J	Capacitor 47p 50V Ceramic
C1032	VCCCCZ1HH100DY	AB		J	Capacitor 10p 50V Ceramic
C1033	VCCCCZ1HH470JY	AB		J	Capacitor 47p 50V Ceramic
C1034	VCEASX1CN106MY	AC		J	Capacitor 10 16V Electrolytic
C1035	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1101	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1102	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1103	VCKYCY1CB104KY	AB		J	Capacitor 0.1 16V Ceramic
C1104	VCKYCY1CB104KY	AB		J	Capacitor 0.1 16V Ceramic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE449FM03 (MAIN Unit)					
C1105	VCKYCY1CB104KY	AB		J	Capacitor 0.1 16V Ceramic
C1109	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1110	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1111	VCKYCY1CB104KY	AB		J	Capacitor 0.1 16V Ceramic
C1112	VCKYCY1CB104KY	AB		J	Capacitor 0.1 16V Ceramic
C1113	VCKYCY1CB104KY	AB		J	Capacitor 0.1 16V Ceramic
C1114	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C1115	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1120	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1121	VCEASY1CN227MY	AC		J	Capacitor 220 16V Electrolytic
C1122	VCEASY1CN227MY	AC		J	Capacitor 220 16V Electrolytic
C1127	VCKYCZ1HB221KY	AA		J	Capacitor 220p 50V Ceramic
C1128	VCEASY1CN227MY	AC		J	Capacitor 220 16V Electrolytic
C1129	VCEASY1CN227MY	AC		J	Capacitor 220 16V Electrolytic
C1130	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C1131	VCKYCZ1HB331KY	AA		J	Capacitor 330p 50V Ceramic
C1132	VCKYCZ1HB331KY	AA		J	Capacitor 330p 50V Ceramic
C1133	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1134	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1135	VCKYCZ1HB331KY	AA		J	Capacitor 330p 50V Ceramic
C1136	VCKYCZ1HB331KY	AA		J	Capacitor 330p 50V Ceramic
C1137	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1138	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1139	VCKYCZ1HB471KY	AB		J	Capacitor 470p 50V Ceramic
C1140	VCKYCZ1HB471KY	AB		J	Capacitor 470p 50V Ceramic
C1141	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1142	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1143	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1144	VCKYCZ1HB471KY	AB		J	Capacitor 470p 50V Ceramic
C1145	VCKYCZ1HB471KY	AB		J	Capacitor 470p 50V Ceramic
C1146	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1147	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1148	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1149	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1150	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1151	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1152	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1153	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1154	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1155	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1156	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1157	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1158	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1159	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1160	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1161	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1162	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1201	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C1202	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C1203	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C1204	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1301	VCKYCZ1HB221KY	AA		J	Capacitor 220p 50V Ceramic
C1302	VCKYCZ1HB221KY	AA		J	Capacitor 220p 50V Ceramic
C1303	VCKYCZ1HB221KY	AA		J	Capacitor 220p 50V Ceramic
C1304	VCKYCZ1HB221KY	AA		J	Capacitor 220p 50V Ceramic
C1305	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1306	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1307	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1308	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1309	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1310	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1311	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1312	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1313	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1314	VCCCCZ1HH560JY	AB		J	Capacitor 56p 50V Ceramic
C1315	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1316	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1317	VCCCCZ1HH560JY	AB		J	Capacitor 56p 50V Ceramic
C1318	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1319	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1320	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1321	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1322	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1323	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1324	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1325	VCEASX1CN106MY	AC		J	Capacitor 10 16V Electrolytic
C1326	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1327	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1328	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1329	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1330	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1331	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1332	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1333	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1401	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE449FM03 (MAIN Unit)					
C1402	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1404	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1405	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1406	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1408	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1409	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1411	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1412	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1413	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1414	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1415	VCKYCY1CB104KY	AB		J	Capacitor 0.1 16V Ceramic
C1416	VCKYCY1CB104KY	AB		J	Capacitor 0.1 16V Ceramic
C1417	VCKYCY1CB104KY	AB		J	Capacitor 0.1 16V Ceramic
C1501	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1502	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1503	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1504	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1505	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1506	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1507	VCKYCY1CB104KY	AB		J	Capacitor 0.1 16V Ceramic
C1508	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1701	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1702	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1703	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1705	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C1706	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1707	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1711	VCKYCZ1EB472KY	AB		J	Capacitor 4700p 25V Ceramic
C1712	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C1714	VCKYCZ1HB222KY	AB		J	Capacitor 2200p 50V Ceramic
C1715	VCEASY1AN157MY	AC		J	Capacitor 150 10V Electrolytic
C1718	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1719	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1720	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C1721	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1722	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1725	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1726	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C1727	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1729	VCEASX1CN226MY	AC		J	Capacitor 22 16V Electrolytic
C1730	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1732	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1735	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1736	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1738	VCKYCZ1HB222KY	AB		J	Capacitor 2200p 50V Ceramic
C1739	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C1740	VCKYCZ1HB222KY	AB		J	Capacitor 2200p 50V Ceramic
C1741	VCEASY1EN107MY	AC		J	Capacitor 100 25V Electrolytic
C1743	RC-KZA383WJZZY	AC		J	Capacitor 10 25V Ceramic
C1744	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C1745	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1746	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1748	VCKYCZ1HB472KY	AA		J	Capacitor 4700p 50V Ceramic
C1749	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C1750	VCKYCZ1HB222KY	AB		J	Capacitor 2200p 50V Ceramic
C1751	VCEASY1EN107MY	AC		J	Capacitor 100 25V Electrolytic
C1753	RC-KZA383WJZZY	AC		J	Capacitor 10 25V Ceramic
C1754	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C1755	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1757	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1760	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1762	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C1764	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1801	VCKYCZ1HB222KY	AB		J	Capacitor 2200p 50V Ceramic
C1802	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C1906	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1907	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1908	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1922	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1941	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1952	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1954	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1957	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1958	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1959	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1960	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1961	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1962	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C1965	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1966	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1969	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1970	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1972	VCCCCZ1HH120JY	AB		J	Capacitor 12p 50V Ceramic
C1977	VCCCCZ1HH150JY	AB		J	Capacitor 15p 50V Ceramic
C1978	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE449FM03 (MAIN Unit)					
C1979	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1984	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1986	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1989	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1990	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1991	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1996	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1998	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C2000	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C2002	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C2004	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C2006	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C2008	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C2009	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C2010	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C2012	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C2014	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C2015	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C2016	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C2301	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C2303	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C2305	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C2311	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C2312	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C2316	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C2318	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C2319	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C2320	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C2322	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C2601	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C2602	VCKYCY1EB473KY	AA		J	Capacitor 0.047 25V Ceramic
C2701	RC-KZA030WJZZY	AB		J	Capacitor 2.2 10V Ceramic
C2702	RC-KZA030WJZZY	AB		J	Capacitor 2.2 10V Ceramic
C2705	VCKYCY1AB105KY	AB		J	Capacitor 1 10V Ceramic
C2706	VCKYCY1AB105KY	AB		J	Capacitor 1 10V Ceramic
C2708	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C2709	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C2710	VCEASY1EN107MY	AC		J	Capacitor 100 25V Electrolytic
C2711	VCKYCY1AB105KY	AB		J	Capacitor 1 10V Ceramic
C2712	VCKYCY1AB105KY	AB		J	Capacitor 1 10V Ceramic
C2714	VCKYCY1AB105KY	AB		J	Capacitor 1 10V Ceramic
C2715	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C2716	VCEASY1EN107MY	AC		J	Capacitor 100 25V Electrolytic
C2717	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C2718	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C2719	VCKYTV1EB474KY	AC		J	Capacitor 0.47 25V Ceramic
C2720	VCKYTV1EB474KY	AC		J	Capacitor 0.47 25V Ceramic
C2721	VCKYTV1EB474KY	AC		J	Capacitor 0.47 25V Ceramic
C2722	VCKYTV1EB474KY	AC		J	Capacitor 0.47 25V Ceramic
C2724	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C2725	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C2730	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3002	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C3003	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C3004	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3005	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C3006	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3007	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C3008	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C3009	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3010	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C3011	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3012	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3013	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C3014	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3015	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3016	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C3017	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3018	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C3019	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3020	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3021	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C3022	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3023	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3024	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3025	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C3026	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C3027	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3028	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3029	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3030	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3031	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3032	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3033	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3034	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE449FM03 (MAIN Unit)					
C3035	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C3036	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C3037	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3038	RC-KZA510WJPZY	AB		J	Capacitor 10 16V Ceramic
C3039	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C3040	VCCCCZ1HH560JY	AB		J	Capacitor 56p 50V Ceramic
C3041	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3042	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C3043	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3044	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3045	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C3046	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C3047	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3051	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3052	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3053	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3054	VCCCCZ1HH150JY	AB		J	Capacitor 15p 50V Ceramic
C3055	VCCCCZ1HH180JY	AB		J	Capacitor 18p 50V Ceramic
C3056	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3057	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C3058	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C3059	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3060	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C3073	VCCCCZ1HH471JY	AA		J	Capacitor 470p 50V Ceramic
C3074	VCCCCZ1HH471JY	AA		J	Capacitor 470p 50V Ceramic
C3075	VCCCCZ1HH471JY	AA		J	Capacitor 470p 50V Ceramic
C4001	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4002	VCKYCZ0JF105ZY	AA		J	Capacitor 1 6.3V Ceramic
C4003	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4004	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C4005	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4006	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4007	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4008	VCEASY0JN476MY	AC		J	Capacitor 47 6.3V Electrolytic
C4009	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4010	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4011	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4012	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4014	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4015	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4017	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4018	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4019	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4020	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4021	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C4022	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C4023	VCCCCZ1HH100DY	AB		J	Capacitor 10p 50V Ceramic
C4024	VCKYCZ0JF105ZY	AA		J	Capacitor 1 6.3V Ceramic
C4025	VCCCCZ1HH100DY	AB		J	Capacitor 10p 50V Ceramic
C4026	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4028	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4029	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4030	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C4031	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4032	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4033	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4034	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4035	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4036	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4037	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4038	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4039	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4040	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4041	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4042	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4043	VCEASY1CN477MY	AD		J	Capacitor 470 16V Electrolytic
C4044	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4045	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4046	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4047	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C4048	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C4049	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4050	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4051	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4052	VCEASY1CN107MY	AC		J	Capacitor 100 16V Electrolytic
C4053	VCKYCZ0JF105ZY	AA		J	Capacitor 1 6.3V Ceramic
C4054	VCKYCZ0JF105ZY	AA		J	Capacitor 1 6.3V Ceramic
C4055	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4056	VCKYCZ1EB682KY	AB		J	Capacitor 6800p 25V Ceramic
C4057	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4058	VCEASY0JN107MY	AC		J	Capacitor 100 6.3V Electrolytic
C4059	VCEASY0JN476MY	AC		J	Capacitor 47 6.3V Electrolytic
C4060	VCEASX1CN106MY	AC		J	Capacitor 10 16V Electrolytic
C4061	VCKYCZ1EB682KY	AB		J	Capacitor 6800p 25V Ceramic
C4063	VCEASX1CN106MY	AC		J	Capacitor 10 16V Electrolytic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE449FM03 (MAIN Unit)					
C4201	VCCCCZ1HH100DY	AB		J	Capacitor 10p 50V Ceramic
C4202	VCCCCZ1HH100DY	AB		J	Capacitor 10p 50V Ceramic
C4203	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4204	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C4205	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C4206	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C4207	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4208	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4210	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4211	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C4214	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C4218	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C4219	VCKYCZ0JF105ZY	AA		J	Capacitor 1 6.3V Ceramic
C4221	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4223	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C4224	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C4225	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C4226	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4227	VCAAPE0JJ227MY	AE		J	Capacitor 220 6.3V Electrolytic
C4228	VCKYTV1AB105KY	AC		J	Capacitor 1 10V Ceramic
C4229	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4230	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4231	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C4232	VCAAPE0JJ227MY	AE		J	Capacitor 220 6.3V Electrolytic
C4233	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C4234	RC-KZA578WJQZY	AC	N	J	Capacitor 1 4V Ceramic
C4235	RC-KZA578WJQZY	AC	N	J	Capacitor 1 4V Ceramic
C4236	RC-KZA578WJQZY	AC	N	J	Capacitor 1 4V Ceramic
C4237	RC-KZA578WJQZY	AC	N	J	Capacitor 1 4V Ceramic
C4251	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C4252	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C4253	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4255	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4256	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4401	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C4402	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4403	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4404	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4405	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4406	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4407	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4409	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4410	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4412	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4417	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4420	VCAAPD1AJ686MY	AE		J	Capacitor 68 10V Electrolytic
C4421	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C8101	VCKYCZ0JF105ZY	AA		J	Capacitor 1 6.3V Ceramic
C8102	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic
C8103	VCCCCZ1HH680JY	AB		J	Capacitor 68p 50V Ceramic
C8104	VCCCCZ1HH471JY	AA		J	Capacitor 470p 50V Ceramic
C8105	VCCCCZ1HH151JY	AB		J	Capacitor 150p 50V Ceramic
C8106	VCCCCZ1HH680JY	AB		J	Capacitor 68p 50V Ceramic
C8107	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic
C8108	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic
C8109	VCCCCZ1HH821JY	AA		J	Capacitor 820p 50V Ceramic
C8110	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic
C8112	VCCCCZ1HH680JY	AB		J	Capacitor 68p 50V Ceramic
C8113	VCCCCZ1HH680JY	AB		J	Capacitor 68p 50V Ceramic
C8114	VCCCCZ1HH821JY	AA		J	Capacitor 820p 50V Ceramic
C8115	VCCCCZ1HH821JY	AA		J	Capacitor 820p 50V Ceramic
C8116	VCCCCZ1HH680JY	AB		J	Capacitor 68p 50V Ceramic
C8118	VCCCCZ1HH471JY	AA		J	Capacitor 470p 50V Ceramic
C8119	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic
C8121	VCCCCZ1HH680JY	AB		J	Capacitor 68p 50V Ceramic
C8122	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic
C8123	VCCCCZ1HH681JY	AA		J	Capacitor 680p 50V Ceramic
C8124	VCCCCZ1HH680JY	AB		J	Capacitor 68p 50V Ceramic
C8125	VCCCCZ1HH680JY	AB		J	Capacitor 68p 50V Ceramic
C8126	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8127	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8128	VCCCCZ1HH471JY	AA		J	Capacitor 470p 50V Ceramic
C8129	VCCCCZ1HH471JY	AA		J	Capacitor 470p 50V Ceramic
C8130	VCCCCZ1HH680JY	AB		J	Capacitor 68p 50V Ceramic
C8131	VCCCCZ1HH151JY	AB		J	Capacitor 150p 50V Ceramic
C8132	VCCCCZ1HH151JY	AB		J	Capacitor 150p 50V Ceramic
C8134	VCCCCZ1HH680JY	AB		J	Capacitor 68p 50V Ceramic
C8135	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C8141	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C8142	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C8201	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C8203	RC-KZA110WJZZY	AD		J	Capacitor 10 25V Ceramic
C8204	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic
C8206	RC-KZA510WJPZY	AB		J	Capacitor 10 16V Ceramic
C8207	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE449FM03 (MAIN Unit)					
C8208	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C8209	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic
C8211	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic
C8212	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic
C8213	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic
C8214	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic
C8216	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic
C8217	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic
C8218	VCKYCY1HB104KY	AA		J	Capacitor 0.1 50V Ceramic
C8219	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic
C8222	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8223	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C8224	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C8225	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C8226	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C8227	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C8229	VCKYCY1HB104KY	AA		J	Capacitor 0.1 50V Ceramic
C8230	RC-KZA110WJZZY	AD		J	Capacitor 10 25V Ceramic
C8231	RC-KZA110WJZZY	AD		J	Capacitor 10 25V Ceramic
C8401	VCKYCZ1EB682KY	AB		J	Capacitor 6800p 25V Ceramic
C8402	VCKYCY1EB104KY	AB		J	Capacitor 0.1 25V Ceramic
C8403	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C8406	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C8410	RC-KZA009WJZZY	AB		J	Capacitor 2.2 6.3V Ceramic
C8411	VCKYCZ1HB472KY	AA		J	Capacitor 4700p 50V Ceramic
C8412	VCCCCZ1HH680JY	AB		J	Capacitor 68p 50V Ceramic
C8413	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C8416	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C8417	VCCCCZ1HH330JY	AB		J	Capacitor 33p 50V Ceramic
C8419	VCKYCY1EB104KY	AB		J	Capacitor 0.1 25V Ceramic
C8420	VCKYCY1EB334KY	AB		J	Capacitor 0.33 25V Ceramic
C8422	VCAAPC1CJ226MY	AG		J	Capacitor 22 16V Electrolytic
C8423	VCCCCZ1HH330JY	AB		J	Capacitor 33p 50V Ceramic
C8424	VCKYCY1EB104KY	AB		J	Capacitor 0.1 25V Ceramic
C8425	VCKYCY1HB104KY	AA		J	Capacitor 0.1 50V Ceramic
C8427	RC-KZA110WJZZY	AD		J	Capacitor 10 25V Ceramic
C8428	RC-KZA510WJPZY	AB		J	Capacitor 10 16V Ceramic
C8429	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic
C8430	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C8431	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C8432	RC-KZA619WJZZY	AB		J	Capacitor 0.47 50V Ceramic
C8433	RC-KZA619WJZZY	AB		J	Capacitor 0.47 50V Ceramic
C8434	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C8435	RC-KZA176WJZZY	AC		J	Capacitor 10 10V Ceramic
C8436	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C8437	RC-KZA211WJZZY	AB		J	Capacitor 2.2 25V Ceramic
C8438	VCKYCY1EB104KY	AB		J	Capacitor 0.1 25V Ceramic
C8439	RC-KZA510WJPZY	AB		J	Capacitor 10 16V Ceramic
C8440	RC-KZA510WJPZY	AB		J	Capacitor 10 16V Ceramic
C8441	RC-KZA510WJPZY	AB		J	Capacitor 10 16V Ceramic
C8442	RC-KZA110WJZZY	AD		J	Capacitor 10 25V Ceramic
C8444	RC-KZA110WJZZY	AD		J	Capacitor 10 25V Ceramic
C8445	RC-KZA110WJZZY	AD		J	Capacitor 10 25V Ceramic
C8458	RC-KZA211WJZZY	AB		J	Capacitor 2.2 25V Ceramic
C8459	RC-KZA110WJZZY	AD		J	Capacitor 10 25V Ceramic
C8461	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic
C8462	RC-KZA110WJZZY	AD		J	Capacitor 10 25V Ceramic
C8463	RC-KZA110WJZZY	AD		J	Capacitor 10 25V Ceramic
C8464	RC-KZA110WJZZY	AD		J	Capacitor 10 25V Ceramic
C8465	RC-KZA110WJZZY	AD		J	Capacitor 10 25V Ceramic
C8466	VCCCCZ1HH330JY	AB		J	Capacitor 33p 50V Ceramic
C8467	VCKYCY1EB334KY	AB		J	Capacitor 0.33 25V Ceramic
C8468	VCKYCY1EB473KY	AA		J	Capacitor 0.047 25V Ceramic
C8469	VCKYCZ1HB331KY	AA		J	Capacitor 330p 50V Ceramic
C8470	VCKYCZ1HB331KY	AA		J	Capacitor 330p 50V Ceramic
C8471	RC-KZA110WJZZY	AD		J	Capacitor 10 25V Ceramic
C8472	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C8473	RC-KZA620WJZZY	AA	N	J	Capacitor 0.1 25V Ceramic
D1101	RH-EXA512WJZZY	AB		J	Zener Diode MAZ8039GHL
D1102	RH-EXA512WJZZY	AB		J	Zener Diode MAZ8039GHL
D1103	RH-EXA512WJZZY	AB		J	Zener Diode MAZ8039GHL
D1104	RH-EXA520WJZZY	AB		J	Zener Diode MAZ8051GML
D1105	RH-EXA512WJZZY	AB		J	Zener Diode MAZ8039GHL
D1106	RH-EXA512WJZZY	AB		J	Zener Diode MAZ8039GHL
D1107	RH-EXA512WJZZY	AB		J	Zener Diode MAZ8039GHL
D1109	RH-EXA520WJZZY	AB		J	Zener Diode MAZ8051GML
D1110	RH-EXA554WJZZY	AB		J	Zener Diode MAZ8150GML
D1112	RH-EXA512WJZZY	AB		J	Zener Diode MAZ8039GHL
D1113	RH-EXA520WJZZY	AB		J	Zener Diode MAZ8051GML
D1114	RH-EXA512WJZZY	AB		J	Zener Diode MAZ8039GHL
D1115	RH-EXA554WJZZY	AB		J	Zener Diode MAZ8150GML
D1116	RH-EXA550WJZZY	AB		J	Zener Diode MAZ8130GML
D1117	RH-EXA520WJZZY	AB		J	Zener Diode MAZ8051GML
D1118	RH-EXA535WJZZY	AM		J	Zener Diode MAZ8082GML
D1119	RH-EXA535WJZZY	AM		J	Zener Diode MAZ8082GML

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE449FM03 (MAIN Unit)					
D1120	RH-EXA535WJZZY	AM		J	Zener Diode MAZ8082GML
D1121	RH-EXA535WJZZY	AM		J	Zener Diode MAZ8082GML
D1201	VHD1SS226//-1Y	AC		J	Diode 1SS226(T5L F T)
D1202	VHD1SS226//-1Y	AC		J	Diode 1SS226(T5L F T)
D1203	RH-EXA523WJZZY	AB		J	Zener Diode MAZ8056GML
D1204	RH-EXA523WJZZY	AB		J	Zener Diode MAZ8056GML
D1205	RH-EXA523WJZZY	AB		J	Zener Diode MAZ8056GML
D1206	VHD1SS226//-1Y	AC		J	Diode 1SS226(T5L F T)
D1207	RH-EXA523WJZZY	AB		J	Zener Diode MAZ8056GML
D1208	VHDKDS184//-1Y	AB		J	Diode KDS184-RTK/P
D1209	RH-EXA523WJZZY	AB		J	Zener Diode MAZ8056GML
D1501	VHDMA3120WA-1Y	AD		J	Diode MAZ3120D0L
D1503	VHDMA3120WA-1Y	AD		J	Diode MAZ3120D0L
D1701	VHDKDS4148/-1Y	AA		J	Diode KDS4148U-RTK/P
D1702	VHDSMAB33L+-1Y	AC		J	Diode SMAB33L-RTK/P
D1705	VHDD1F60///-1Y	AC		J	Diode D1F60
D1725	VHD1SS390++-1Y	AB		J	Diode 1SS390TE61
D1726	VHDKDS4148/-1Y	AA		J	Diode KDS4148U-RTK/P
D1735	VHDSMAB33L+-1Y	AC		J	Diode SMAB33L-RTK/P
D1745	VHDSMAB33L+-1Y	AC		J	Diode SMAB33L-RTK/P
D1755	VHDKDS4148/-1Y	AA		J	Diode KDS4148U-RTK/P
D1756	VHDKDS4148/-1Y	AA		J	Diode KDS4148U-RTK/P
D1801	VHD1SS355//-1Y	AB		J	Diode 1SS355TE-17
D1802	RH-EXA526WJZZY	AB		J	Diode MAZ8062GML
D1803	VHD1SS355//-1Y	AB		J	Diode 1SS355TE-17
D1804	VHD1SS355//-1Y	AB		J	Diode 1SS355TE-17
D1805	RH-EXA514WJZZY	AB		J	Diode MAZ8043GML
D1904	VHDKDS4148/-1Y	AA		J	Diode KDS4148U-RTK/P
D1905	VHDKDS184//-1Y	AB		J	Diode KDS184-RTK/P
D1906	VHDKDS184//-1Y	AB		J	Diode KDS184-RTK/P
D1907	VHDKDS4148/-1Y	AA		J	Diode KDS4148U-RTK/P
D1908	VHDKDS4148/-1Y	AA		J	Diode KDS4148U-RTK/P
D1909	VHDRB520S30-1Y	AC		J	Diode RB520S-30TE61
D1923	VHDKDS4148/-1Y	AA		J	Diode KDS4148U-RTK/P
D2301	RH-EXA547WJZZY	AB		J	Diode MAZ8120GML
D4201	VHDKDS4148/-1Y	AA		J	Diode KDS4148U-RTK/P
D8101	VHDKDS184//-1Y	AB		J	Diode KDS184-RTK/P
D8401	VHDRB550EA+-1Y	AC		J	Diode RB550EATR
D8402	VHDRB550EA+-1Y	AC		J	Diode RB550EATR
D8403	VHDMA24D50+-1Y	AD		J	Diode MA24D5000B
D8405	VHDRB550EA+-1Y	AC		J	Diode RB550EATR
D8406	VHDRB160M30-1Y	AC		J	Diode RB160M-30TR
D8407	VHDRB160M30-1Y	AC		J	Diode RB160M-30TR
D8408	VHDRB461F++-1Y	AC	N	J	Diode RB461FFJT106
D8409	VHDRB160M30-1Y	AC		J	Diode RB160M-30TR
D8410	VHDD1F60///-1Y	AC		J	Diode D1F60
D8411	VHD1SS355//-1Y	AB		J	Diode 1SS355TE-17
FB201	RBLN-0210TAZZY	AB		J	Balun BLN-0210TA
FB1031	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB1101	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1102	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1103	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1104	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1105	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1106	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1107	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1108	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1109	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1110	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1111	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1112	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1201	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB1202	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB1203	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB1204	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB1205	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB1301	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1302	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1303	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1304	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1305	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1306	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1309	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB1401	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB1402	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB1501	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB1502	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB1701	RBLN-A303WJZZY	AB		J	Balun BLN-A303WJ
FB1702	RBLN-0207TAZZY	AB		J	Balun BLN-0207TA
FB1703	RBLN-0207TAZZY	AB		J	Balun BLN-0207TA
FB1735	RBLN-A303WJZZY	AB		J	Balun BLN-A303WJ
FB1745	RBLN-A303WJZZY	AB		J	Balun BLN-A303WJ
FB1801	RBLN-0207TAZZY	AB		J	Balun BLN-0207TA
FB1901	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB1902	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE449FM03 (MAIN Unit)					
FB1941	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB1951	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB1952	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB1953	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB1954	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB1955	RBLN-0210TAZZY	AB		J	Balun BLN-0210TA
FB1956	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB1957	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB2301	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB2302	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB2304	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB2305	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB2310	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB3001	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB3002	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB3003	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB3004	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB3005	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB3006	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB3021	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB3022	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB3035	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB3036	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB3037	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB3038	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB3051	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB3052	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB3053	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB3054	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB3055	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB3071	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB3072	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB3073	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB4001	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB4002	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB4003	RBLN-0210TAZZY	AB		J	Balun BLN-0210TA
FB4004	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB4201	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB4202	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB4251	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB4401	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB4402	RBLN-A192WJZZY	AA		J	Balun BLN-A192WJ
FB8101	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8102	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8103	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8104	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8105	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8106	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FL1101	RFiLN0017TAZZY	AC		J	Filter FiLN0017TA
FL1102	RFiLN0017TAZZY	AC		J	Filter FiLN0017TA
FL1103	RFiLN0017TAZZY	AC		J	Filter FiLN0017TA
FL1104	RFiLN0017TAZZY	AC		J	Filter FiLN0017TA
FL1105	RFiLN0017TAZZY	AC		J	Filter FiLN0017TA
FL1106	RFiLN0017TAZZY	AC		J	Filter FiLN0017TA
FL1107	RFiLN0017TAZZY	AC		J	Filter FiLN0017TA
FL1108	RFiLN0017TAZZY	AC		J	Filter FiLN0017TA
FL1109	RFiLN0017TAZZY	AC		J	Filter FiLN0017TA
FL1110	RFiLN0017TAZZY	AC		J	Filter FiLN0017TA
FL1201	RFiLN0003TAZZY	AD		J	Filter FiLN0003TA
FL1202	RFiLN0003TAZZY	AD		J	Filter FiLN0003TA
FL1203	RFiLN0003TAZZY	AD		J	Filter FiLN0003TA
FL8101	RFiLZA007WJZZY	AD		J	Filter FiLZA007WJ
IC202	VHiPQ1M335M-1Y	AD		J	IC PQ1M335M2SPQ
IC203	VHiLV4053FT-1Y	AE		J	IC TC74LVX4053FT(EL)
IC204	VHiTCR5SB25-1Y	AD		J	IC TCR5SB25(TE85L,F)
IC205	VHiMM3271AN-1Y	AC		J	IC MM3271ANRE
IC207	RH-iXB964WJZZQ	AT		J	IC STV0362
IC1001	VHiNJM2234V-1Y	AE		J	IC NJM2234V(TE1)
IC1002	VHiNJM4558M-1Y	AD		J	IC NJM4558M-TE1
IC1101	VHiMM1506XN-1Y	AD		J	IC MM1506XNRE
IC1102	VHiMM1506XN-1Y	AD		J	IC MM1506XNRE
IC1201	RH-iXC206WJZZS	AH		J	IC PC
IC1301	VHiNJM2750M-1Y	AH		J	IC NJM2750M(TE2)
IC1401	VHiSM5309AV-1Y	AL		J	IC SM5309AV-G-ET
IC1501	VHiiSL83220-1Y	AQ		J	IC ISL83220ECVZ-T(S2702)
IC1502	VHiMM1507XN-1Y	AD		J	IC MM1507XNRE
IC1701	VHiPQ1M335M-1Y	AD		J	IC PQ1M335M2SPQ
IC1702	VHiLV5805M+-1Y	AG		J	IC LV5805M-TE-L-E
IC1703	VHiPST8444N-1Y	AC		J	IC IC-PST8444NR
IC1725	VHiPQ1R50//-1Y	AF		J	IC PQ1R50J0000H
IC1726	VHiPQ20WZ51-1Y	AF		J	IC PQ20WZ5UJ00H
IC1735	VHiLV5805M+-1Y	AG		J	IC LV5805M-TE-L-E
IC1745	VHiLV5805M+-1Y	AG		J	IC LV5805M-TE-L-E
IC1755	VHiPQ012GN1-1Y	AF		J	IC PQ012GN01ZPH
IC1756	VHiPQ1LA185-1Y	AD		J	IC PQ1LA185MSPQ

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE449FM03 (MAIN Unit)					
IC1902	RH-iXC448WJZZS	AH		J	IC HDMI EXT7
IC1922	RH-iXC447WJZZS	AH		J	IC HDMI EXT6
IC1941	VHiTVHC153T-1Y	AE		J	IC TC74VHC153FT(EL,M)
IC1951	VHiSii9025+-1Q	AX		J	IC SII9025CTU
IC2302	RH-iXC009WJZZQ	AU		J	IC 86FS49AUG-6NU2(JZ
IC2303	VHiPST8428N-1Y	AC		J	IC IC-PST8428NR
IC2601	VHiPST8428N-1Y	AC		J	IC IC-PST8428NR
IC2701	VHiYDA147SZ-1Y	AM		J	IC YDA147-SZE2
IC3001	RH-iXC354WJZZQ	BK	N	J	IC VCT7993P-FA-A1-H000
IC3002	VHiPST8415N-1Y	AC		J	IC IC-PST8415NR
IC3051	VHiBR24S64M-1Y	AF		J	IC BR24S64FVM-WTR
IC4001	RH-iXC243WJZZQ	AY		J	IC STI5105ALC
IC4003	VHiPST8428N-1Y	AC		J	IC IC-PST8428NR
IC4004	VHiLV4052FT-1Y	AF		J	IC TC74LVX4052FT(EL,M)
IC4005	VHiNJM4558M-1Y	AD		J	IC NJM4558M-TE1
IC4201	RH-iXB765WJQZQ	AW		J	IC K4H561638H-UCB3
IC4202	VHiPQ070XNA-1Y	AE		J	IC PQ070XNA1ZPH
IC4251	RH-iXC361WJZZQ	AQ	N	J	IC M29W160ET70N6E
IC4252	VHiBR24S64M-1Y	AF		J	IC BR24S64FVM-WTR
IC4401	VHiLCX245FT-1Y	AD		J	IC TC74LCX245FT(EKJ)
IC4402	VHiLCX126FT-1Y	AD		J	IC TC74LCX126FT(EL,K)
IC4403	VHiAHC1G04W-1Y	AC		J	IC 74AHC1G04GW,125
IC4404	VHiLCX16244-1Y	AF	N	J	IC TC74LCX16244(EL,F)
IC4405	VHiLCX16244-1Y	AF	N	J	IC TC74LCX16244(EL,F)
IC4407	VHiTC7SH32U1EY	AC		J	IC TC7SH32FU(TE85L,JF)
IC4409	VHiAHC1G04W-1Y	AC		J	IC 74AHC1G04GW,125
IC4410	VHiAOZ1320C-1Y	AE		J	IC AOZ1320CI-04
IC8101	RH-iXC564WJZZS			J	IC LCD_CONT
IC8102	VHiT7WU04FK-1Y	AD		J	IC T7WU04FK
IC8103	VHiT3Z18AFG-1Q	BA		J	IC T3Z18AFG-0003(O2)
IC8201	VHiBD8143MU-1Y	AM		J	IC BD8143MUV-E2
IC8202	VHiBU55041+-1Y	AF		J	IC BU55041HFN-TR-TR
IC8402	VHiBD8162EK-1Q	AQ		J	IC VHIBD8162EK-1Q
J1301	QJAKJ0008GEZZ	AD		J	Jack
J1302	QJAKJ0008GEZZ	AD		J	Jack
J1303	QJAKFA061WJZZ	AE		J	Jack
J1304	QJAKFA061WJZZ	AE		J	Jack
J1401	QJAKGA131WJZZ	AG		J	Jack
L203	VPCNN2R2JR77NY	AB		J	Coil Peaking 2.2μH
L204	VPCNN2R2JR77NY	AB		J	Coil Peaking 2.2μH
L205	VPCNN2R2JR77NY	AB		J	Coil Peaking 2.2μH
L206	VPCNN2R2JR77NY	AB		J	Coil Peaking 2.2μH
L207	VPCNN2R2JR77NY	AB		J	Coil Peaking 2.2μH
L263	VPCNN120J1R9NY	AB		J	Coil Peaking 12μH
L1031	VPD9M100J1R7NY	AC		J	Coil Peaking 10μH
L1101	VPCNN120J1R9NY	AB		J	Coil Peaking 12μH
L1701	RCiLPA964WJZZY	AD	N	J	Coil 10μH
L1735	RCiLPA085WJZZY	AD		J	Coil
L1745	RCiLPA964WJZZY	AD	N	J	Coil 10μH
L2601	RCiLFA279WJZZY	AC		J	Coil
L2602	RCiLFA279WJZZY	AC		J	Coil
L2603	RCiLFA279WJZZY	AC		J	Coil
L2604	RCiLFA279WJZZY	AC		J	Coil
L2605	RCiLFA279WJZZY	AC		J	Coil
L2606	RCiLFA279WJZZY	AC		J	Coil
L2701	RCiLPA899WJZZY	AC		J	Coil Peaking 22μH
L2702	RCiLPA899WJZZY	AC		J	Coil Peaking 22μH
L2703	RCiLPA899WJZZY	AC		J	Coil Peaking 22μH
L2704	RCiLPA899WJZZY	AC		J	Coil Peaking 22μH
L8101	RCiLFA122WJZZY	AD		J	Coil
L8102	RCiLFA122WJZZY	AD		J	Coil
L8103	RCiLFA122WJZZY	AD		J	Coil
L8104	RCiLFA122WJZZY	AD		J	Coil
L8105	RCiLFA122WJZZY	AD		J	Coil
L8106	RCiLFA122WJZZY	AD		J	Coil
L8107	RCiLFA122WJZZY	AD		J	Coil
L8108	RCiLFA122WJZZY	AD		J	Coil
L8109	RCiLFA122WJZZY	AD		J	Coil
L8110	RCiLFA122WJZZY	AD		J	Coil
L8111	RCiLFA122WJZZY	AD		J	Coil
L8112	RCiLFA122WJZZY	AD		J	Coil
L8113	RCiLFA275WJZZY	AC		J	Coil
L8114	RCiLFA275WJZZY	AC		J	Coil
L8401	RCiLPA962WJZZY	AC	N	J	Coil 4.7μH
L8402	RCiLPA964WJZZY	AD	N	J	Coil 10μH
L8403	RCiLPA964WJZZY	AD	N	J	Coil 10μH
LUG1701	QLUGHA006WJZZY	AC		J	Lug
LUG1702	QLUGHA006WJZZY	AC		J	Lug
LUG1703	QLUGHA006WJZZY	AC		J	Lug
LUG1704	QLUGHA006WJZZY	AC		J	Lug
LUG1705	QLUGHA006WJZZY	AC		J	Lug
LUG1706	QLUGHA006WJZZY	AC		J	Lug
P1001	QCNCMA012WJZZ	AD		J	Connector 15Pin
P1701	QPLGNA168WJZZY	AF		J	Plug 12Pin(PD)
P2301	QPLGNA325WJZZY	AC		J	Plug 5Pin (RA)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE449FM03 (MAIN Unit)					
P2302	QPLGNA329WJZZY	AD		J	Plug 9Pin(LB)
P2701	QPLGNA160WJZZY	AD		J	Plug 4Pin(SP)
P3071	QPLGNA324WJZZY	AC		J	Plug 4Pin(KM)
P3081	QPLGN0567FJZZY	AD		J	Plug 5Pin
P4001	QPLGN0463TAZZY	AC		J	Plug, 4Pin(RS)
P4401	QCNCMA313WJSA	AK		J	Plug
Q203	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q204	RH-TXA026WJZZY	AD		J	Transistor PBLS2001D,115
Q1001	VSiMH23T110-1Y	AC		J	Transistor IMH23T110
Q1031	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q1101	VSiMH23T110-1Y	AC		J	Transistor IMH23T110
Q1102	VSiMH23T110-1Y	AC		J	Transistor IMH23T110
Q1105	VS2SA1530AR-1Y	AB		J	Transistor 2SA1530A-T112-1R
Q1106	VS2SA1530AR-1Y	AB		J	Transistor 2SA1530A-T112-1R
Q1107	VS2SA1530AR-1Y	AB		J	Transistor 2SA1530A-T112-1R
Q1108	VS2SA1530AR-1Y	AB		J	Transistor 2SA1530A-T112-1R
Q1301	VS2SA1530AR-1Y	AB		J	Transistor 2SA1530A-T112-1R
Q1302	VS2SA1530AR-1Y	AB		J	Transistor 2SA1530A-T112-1R
Q1303	VSiMH23T110-1Y	AC		J	Transistor IMH23T110
Q1501	VSSM3K7002F-1Y	AC		J	Transistor SSM3K7002F(5LTST,F)
Q1801	VSRDTC144EE-1Y	AA		J	Transistor PDTC144EE,115
Q1802	VSDTA124EKA-1Y	AB		J	Transistor DTA124EKAT146
Q1901	VSRDTC144EE-1Y	AA		J	Transistor PDTC144EE,115
Q1902	VSRDTC144EE-1Y	AA		J	Transistor PDTC144EE,115
Q1903	VSSSM3K15F+-1Y	AB	N	J	Transistor SSM3K15F
Q1904	VSSSM3K15F+-1Y	AB	N	J	Transistor SSM3K15F
Q1905	VSRN4904///-1Y	AB		J	Transistor RN4904
Q1906	VSRDTC144EE-1Y	AA		J	Transistor PDTC144EE,115
Q1921	VSRDTC144EE-1Y	AA		J	Transistor PDTC144EE,115
Q1922	VSRDTC144EE-1Y	AA		J	Transistor PDTC144EE,115
Q1923	VSSSM3K15F+-1Y	AB	N	J	Transistor SSM3K15F
Q1924	VSSSM3K15F+-1Y	AB	N	J	Transistor SSM3K15F
Q1925	VSRN4904///-1Y	AB		J	Transistor RN4904
Q2701	VSDTC614TK+-1Y	AB		J	Transistor DTC614TKT146
Q3051	VSSM3K7002F-1Y	AC		J	Transistor SSM3K7002F(5LTST,F)
Q3052	VSSM3K7002F-1Y	AC		J	Transistor SSM3K7002F(5LTST,F)
Q4001	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q4002	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q4403	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q8401	VSEMZ1+++++-1Y	AC		J	Transistor EMZ1T2R
Q8402	VSDTC114EE/-1Y	AB		J	Transistor DTC114EETL
Q8403	VSTPCP8602+-1Y	AD		J	Transistor VSTPCP8602+-1Y
Q8404	VS2SA1530AR-1Y	AB		J	Transistor 2SA1530A-T112-1R
Q8405	VSTPCP8505+-1Y	AD		J	Transistor VSTPCP8505+-1Y
Q8408	VS2SD1767++-1Y	AD		J	Transistor 2SD1767T100
Q8410	VSRK7002A++-1Y	AB		J	Transistor RK7002AT116
Q8450	VSRSS050P03-1Y	AG		J	Transistor RSS050P03TB
R206	VRK-SA1JF220JY	AA		J	Resistor 22 1/16W Metal Composition
R211	VRS-CZ1JF392JY	AA		J	Resistor 3.9k 1/16W Metal Oxide
R212	VRS-CZ1JF151JY	AA		J	Resistor 150 1/16W Metal Oxide
R213	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R214	VRS-CZ1JF331JY	AA		J	Resistor 330 1/16W Metal Oxide
R218	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R222	VRK-SA1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Composition
R223	VRK-SA1JF220JY	AA		J	Resistor 22 1/16W Metal Composition
R224	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R225	VRK-SA1JF103JY	AB		J	Resistor 10k 1/16W Metal Composition
R226	VRS-CZ1JF561JY	AA		J	Resistor 560 1/16W Metal Oxide
R227	VRS-CZ1JF561JY	AA		J	Resistor 560 1/16W Metal Oxide
R228	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R229	VRS-CZ1JF181JY	AA		J	Resistor 180 1/16W Metal Oxide
R230	VRS-CG1JF103JY	AB		J	Resistor 10k 1/16W Metal Oxide
R233	VRK-SA1JF220JY	AA		J	Resistor 22 1/16W Metal Composition
R234	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R236	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R237	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R238	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R239	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R240	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R1006	VRS-CZ1JF682JY	AA		J	Resistor 6.8k 1/16W Metal Oxide
R1010	VRS-CZ1JF392JY	AA		J	Resistor 3.9k 1/16W Metal Oxide
R1011	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1012	VRS-TQ2EF560JY	AA		J	Resistor 56 1/4W Metal Oxide
R1013	VRS-TQ2EF560JY	AA		J	Resistor 56 1/4W Metal Oxide
R1014	VRK-SA1JF182JY	AC		J	Resistor 1.8k 1/16W Metal Composition
R1015	VRS-TW2HF820JY	AB		J	Resistor 82 1/2W Metal Oxide
R1016	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1017	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1018	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1019	VRS-CZ1JF122JY	AA		J	Resistor 1.2k 1/16W Metal Oxide
R1020	VRS-CZ1JF122JY	AA		J	Resistor 1.2k 1/16W Metal Oxide
R1021	VRK-SA1JF103JY	AB		J	Resistor 10k 1/16W Metal Composition
R1022	VRK-SA1JF103JY	AB		J	Resistor 10k 1/16W Metal Composition
R1023	VRK-SA1JF103JY	AB		J	Resistor 10k 1/16W Metal Composition
R1031	VRS-CZ1JF331FY	AA		J	Resistor 330 1/16W Metal Oxide

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE449FM03 (MAIN Unit)					
R1032	VRS-CZ1JF331FY	AA		J	Resistor 330 1/16W Metal Oxide
R1033	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1034	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1035	VRS-CZ1JF330FY	AA		J	Resistor 33 1/16W Metal Oxide
R1036	VRS-CZ1JF161FY	AA		J	Resistor 160 1/16W Metal Oxide
R1101	VRS-CZ1JF153FY	AA		J	Resistor 15k 1/16W Metal Oxide
R1102	VRS-CZ1JF393FY	AA		J	Resistor 39k 1/16W Metal Oxide
R1103	VRS-CZ1JF153FY	AA		J	Resistor 15k 1/16W Metal Oxide
R1107	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1108	VRS-TQ2EF680JY	AA		J	Resistor 68 1/4W Metal Oxide
R1109	VRS-TQ2EF101JY	AA		J	Resistor 100 1/4W Metal Oxide
R1110	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1111	VRS-CZ1JF393FY	AA		J	Resistor 39k 1/16W Metal Oxide
R1112	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1113	VRS-TQ2EF680JY	AA		J	Resistor 68 1/4W Metal Oxide
R1117	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1118	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1122	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1123	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1124	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1125	VRS-TQ2EF101JY	AA		J	Resistor 100 1/4W Metal Oxide
R1126	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1127	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1130	VRS-CZ1JF221JY	AA		J	Resistor 220 1/16W Metal Oxide
R1131	VRS-TV1JD221JY	AA		J	Resistor 220 1/16W Metal Oxide
R1132	VRS-TV1JD221JY	AA		J	Resistor 220 1/16W Metal Oxide
R1134	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1135	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1136	VRS-TV1JD221JY	AA		J	Resistor 220 1/16W Metal Oxide
R1137	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1138	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1139	VRS-TV1JD221JY	AA		J	Resistor 220 1/16W Metal Oxide
R1142	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1143	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1144	VRK-SA1JF101JY	AC		J	Resistor 100 1/16W Metal Composition
R1145	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1146	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1147	VRK-SA1JF101JY	AC		J	Resistor 100 1/16W Metal Composition
R1148	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1149	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1150	VRS-CZ1JF564JY	AB		J	Resistor 560k 1/16W Metal Oxide
R1151	VRS-CZ1JF564JY	AB		J	Resistor 560k 1/16W Metal Oxide
R1152	VRK-SA1JF331JY	AA		J	Resistor 330 1/16W Metal Composition
R1153	VRK-SA1JF331JY	AA		J	Resistor 330 1/16W Metal Composition
R1154	VRS-CZ1JF564JY	AB		J	Resistor 560k 1/16W Metal Oxide
R1155	VRS-CZ1JF564JY	AB		J	Resistor 560k 1/16W Metal Oxide
R1156	VRK-SA1JF272JY	AA		J	Resistor 2.7k 1/16W Metal Composition
R1157	VRK-SA1JF272JY	AA		J	Resistor 2.7k 1/16W Metal Composition
R1201	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1202	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1203	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1204	VRS-CZ1JF221JY	AA		J	Resistor 220 1/16W Metal Oxide
R1205	VRS-CZ1JF221JY	AA		J	Resistor 220 1/16W Metal Oxide
R1206	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1207	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1208	VRS-CG1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1209	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1210	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1301	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1302	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1303	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1304	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1305	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1306	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1307	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1308	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1309	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1310	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1311	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1312	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1313	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1314	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1315	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1316	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1317	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1318	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1319	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1320	VRS-CZ1JF221JY	AA		J	Resistor 220 1/16W Metal Oxide
R1321	VRS-CZ1JF561JY	AA		J	Resistor 560 1/16W Metal Oxide
R1322	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1323	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1324	VRS-CZ1JF221JY	AA		J	Resistor 220 1/16W Metal Oxide
R1325	VRS-CZ1JF561JY	AA		J	Resistor 560 1/16W Metal Oxide
R1326	VRS-CZ1JF564JY	AB		J	Resistor 560k 1/16W Metal Oxide
R1327	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE449FM03 (MAIN Unit)					
R1328	VRS-CZ1JF564JY	AB		J	Resistor 560k 1/16W Metal Oxide
R1329	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1330	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1331	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1332	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1401	VRK-SA1JF220JY	AA		J	Resistor 22 1/16W Metal Composition
R1402	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1403	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1404	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1405	VRS-CZ1JF182FY	AA		J	Resistor 1.8k 1/16W Metal Oxide
R1409	VRS-CZ1JF161FY	AA		J	Resistor 160 1/16W Metal Oxide
R1410	VRS-CZ1JF161FY	AA		J	Resistor 160 1/16W Metal Oxide
R1411	VRS-CZ1JF161FY	AA		J	Resistor 160 1/16W Metal Oxide
R1502	VRS-TV1JD101JY	AA		J	Resistor 100 1/10W Metal Oxide
R1503	VRS-TV1JD101JY	AA		J	Resistor 100 1/10W Metal Oxide
R1504	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1505	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1506	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1507	VRS-CZ1JF223JY	AA		J	Resistor 22k 1/16W Metal Oxide
R1508	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1701	VRS-CZ1JF153FY	AA		J	Resistor 15k 1/16W Metal Oxide
R1702	VRS-CZ1JF823FY	AA		J	Resistor 82k 1/16W Metal Oxide
R1703	VRS-CZ1JF103FY	AB		J	Resistor 10k 1/16W Metal Oxide
R1705	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1706	VRS-TW2HF1R0JY	AA		J	Resistor 1 1/2W Metal Oxide
R1707	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1708	VRS-CZ1JF392JY	AA		J	Resistor 3.9k 1/16W Metal Oxide
R1709	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1710	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1711	VRS-TW2HF1R0JY	AA		J	Resistor 1 1/2W Metal Oxide
R1712	VRS-TW2HF1R0JY	AA		J	Resistor 1 1/2W Metal Oxide
R1714	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1719	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1725	VRS-CZ1JF222FY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R1726	VRS-TW2HF3R3JY	AA		J	Resistor 3.3 1/2W Metal Oxide
R1727	VRS-TW2HF3R3JY	AA		J	Resistor 3.3 1/2W Metal Oxide
R1728	VRS-CZ1JF202FY	AA		J	Resistor 2k 1/16W Metal Oxide
R1729	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1730	VRS-CZ1JF202FY	AA		J	Resistor 2k 1/16W Metal Oxide
R1735	VRS-CZ1JF154FY	AA		J	Resistor 150k 1/16W Metal Oxide
R1736	VRS-CZ1JF823FY	AA		J	Resistor 82k 1/16W Metal Oxide
R1737	VRS-CZ1JF103FY	AB		J	Resistor 10k 1/16W Metal Oxide
R1738	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1740	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1741	VRS-TW2HF1R0JY	AA		J	Resistor 1 1/2W Metal Oxide
R1742	VRS-TW2HF1R0JY	AA		J	Resistor 1 1/2W Metal Oxide
R1743	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1745	VRS-CZ1JF154FY	AA		J	Resistor 150k 1/16W Metal Oxide
R1746	VRS-CZ1JF393FY	AA		J	Resistor 39k 1/16W Metal Oxide
R1747	VRS-CZ1JF103FY	AB		J	Resistor 10k 1/16W Metal Oxide
R1748	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1750	VRS-CZ1JF562JY	AA		J	Resistor 5.6k 1/16W Metal Oxide
R1751	VRS-TW2HF1R0JY	AA		J	Resistor 1 1/2W Metal Oxide
R1752	VRS-TW2HF1R0JY	AA		J	Resistor 1 1/2W Metal Oxide
R1753	VRS-TW2HF1R0JY	AA		J	Resistor 1 1/2W Metal Oxide
R1754	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1755	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1756	VRS-TW2HF2R2JY	AA		J	Resistor 2.2 1/2W Metal Oxide
R1757	VRS-TW2HF2R2JY	AA		J	Resistor 2.2 1/2W Metal Oxide
R1758	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1801	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R1802	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1803	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1903	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1904	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1905	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1907	VRK-SA1JF474JY	AA		J	Resistor 470k 1/16W Metal Composition
R1909	VRK-SA1JF473JY	AC		J	Resistor 47k 1/16W Metal Composition
R1911	VRS-CZ1JF273JY	AA		J	Resistor 27k 1/16W Metal Oxide
R1912	VRK-SA1JF100JY	AB		J	Resistor 10 1/16W Metal Composition
R1915	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1921	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1923	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1924	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1926	VRK-SA1JF474JY	AA		J	Resistor 470k 1/16W Metal Composition
R1928	VRK-SA1JF473JY	AC		J	Resistor 47k 1/16W Metal Composition
R1930	VRK-SA1JF100JY	AB		J	Resistor 10 1/16W Metal Composition
R1933	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1951	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R1952	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R1953	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R1954	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R1955	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R1956	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R1957	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE449FM03 (MAIN Unit)					
R1958	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R1959	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1960	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R1961	VRS-CZ1JF223JY	AA		J	Resistor 22k 1/16W Metal Oxide
R1962	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R1965	VRS-CZ1JF105JY	AA		J	Resistor 1M 1/16W Metal Oxide
R1966	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1967	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R1968	VRS-CZ1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R1969	VRS-CZ1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R1970	VRS-CZ1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R1971	VRK-SA1JF220JY	AA		J	Resistor 22 1/16W Metal Composition
R1973	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R2302	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R2303	VRS-CG1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R2304	VRS-CG1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R2305	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R2306	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R2307	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R2312	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R2313	VRS-CZ1JF105JY	AA		J	Resistor 1M 1/16W Metal Oxide
R2317	VRK-SA1JF220JY	AA		J	Resistor 22 1/16W Metal Composition
R2324	VRS-CZ1JF331JY	AA		J	Resistor 330 1/16W Metal Oxide
R2325	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R2327	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R2328	VRK-SA1JF103JY	AB		J	Resistor 10k 1/16W Metal Composition
R2329	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R2336	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2603	VRS-CZ1JF474JY	AA		J	Resistor 470k 1/16W Metal Oxide
R2612	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2614	VRS-CZ1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R2615	VRS-CZ1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R2706	VRK-SA1JF182JY	AC		J	Resistor 1.8k 1/16W Metal Composition
R2711	VRK-SA1JF103JY	AB		J	Resistor 10k 1/16W Metal Composition
R2715	VRS-CZ1JF274FY	AA		J	Resistor 270k 1/16W Metal Oxide
R2716	VRS-CZ1JF104FY	AB		J	Resistor 100k 1/16W Metal Oxide
R2723	VRS-CZ1JF224JY	AA		J	Resistor 220k 1/16W Metal Oxide
R2729	VRS-CZ1JF474JY	AA		J	Resistor 470k 1/16W Metal Oxide
R2730	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2731	VRS-CZ1JF562JY	AA		J	Resistor 5.6k 1/16W Metal Oxide
R3001	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R3003	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R3004	VRS-CZ1JF622JY	AA		J	Resistor 6.2k 1/16W Metal Oxide
R3007	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R3054	VRK-SA1JF220JY	AA		J	Resistor 22 1/16W Metal Composition
R3056	VRK-SA1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Composition
R3071	VRS-CZ1JF333FY	AA		J	Resistor 33k 1/16W Metal Oxide
R3072	VRS-CZ1JF333FY	AA		J	Resistor 33k 1/16W Metal Oxide
R3073	VRS-CZ1JF103FY	AB		J	Resistor 10k 1/16W Metal Oxide
R3074	VRS-CZ1JF102FY	AA		J	Resistor 1k 1/16W Metal Oxide
R3075	VRS-CZ1JF102FY	AA		J	Resistor 1k 1/16W Metal Oxide
R3076	VRS-CZ1JF102FY	AA		J	Resistor 1k 1/16W Metal Oxide
R3081	VRK-SA1JF220JY	AA		J	Resistor 22 1/16W Metal Composition
R4002	VRS-CZ1JF103FY	AB		J	Resistor 10k 1/16W Metal Oxide
R4004	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R4005	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R4007	VRS-CZ1JF201FY	AA		J	Resistor 200 1/16W Metal Oxide
R4010	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R4012	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4013	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4014	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4016	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4017	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4019	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4020	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4022	VRS-CZ1JF151JY	AA		J	Resistor 150 1/16W Metal Oxide
R4023	VRS-CZ1JF151JY	AA		J	Resistor 150 1/16W Metal Oxide
R4024	VRS-CZ1JF151JY	AA		J	Resistor 150 1/16W Metal Oxide
R4025	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4026	VRS-CZ1JF151JY	AA		J	Resistor 150 1/16W Metal Oxide
R4027	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4028	VRS-CZ1JF561JY	AA		J	Resistor 560 1/16W Metal Oxide
R4030	VRS-CZ1JF391JY	AA		J	Resistor 390 1/16W Metal Oxide
R4031	VRS-CZ1JF392JY	AA		J	Resistor 3.9k 1/16W Metal Oxide
R4032	VRS-CG1JF103JY	AB		J	Resistor 10k 1/16W Metal Oxide
R4033	VRS-CZ1JF561JY	AA		J	Resistor 560 1/16W Metal Oxide
R4042	VRS-CZ1JF471JY	AA		J	Resistor 470 1/16W Metal Oxide
R4043	VRS-CZ1JF392JY	AA		J	Resistor 3.9k 1/16W Metal Oxide
R4044	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4045	VRS-CZ1JF471JY	AA		J	Resistor 470 1/16W Metal Oxide
R4046	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R4047	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R4048	VRS-CZ1JF561JY	AA		J	Resistor 560 1/16W Metal Oxide
R4049	VRK-SA1JF220JY	AA		J	Resistor 22 1/16W Metal Composition
R4201	VRK-SB1FF820JY	AA		J	Resistor 82 1/32W Metal Composition

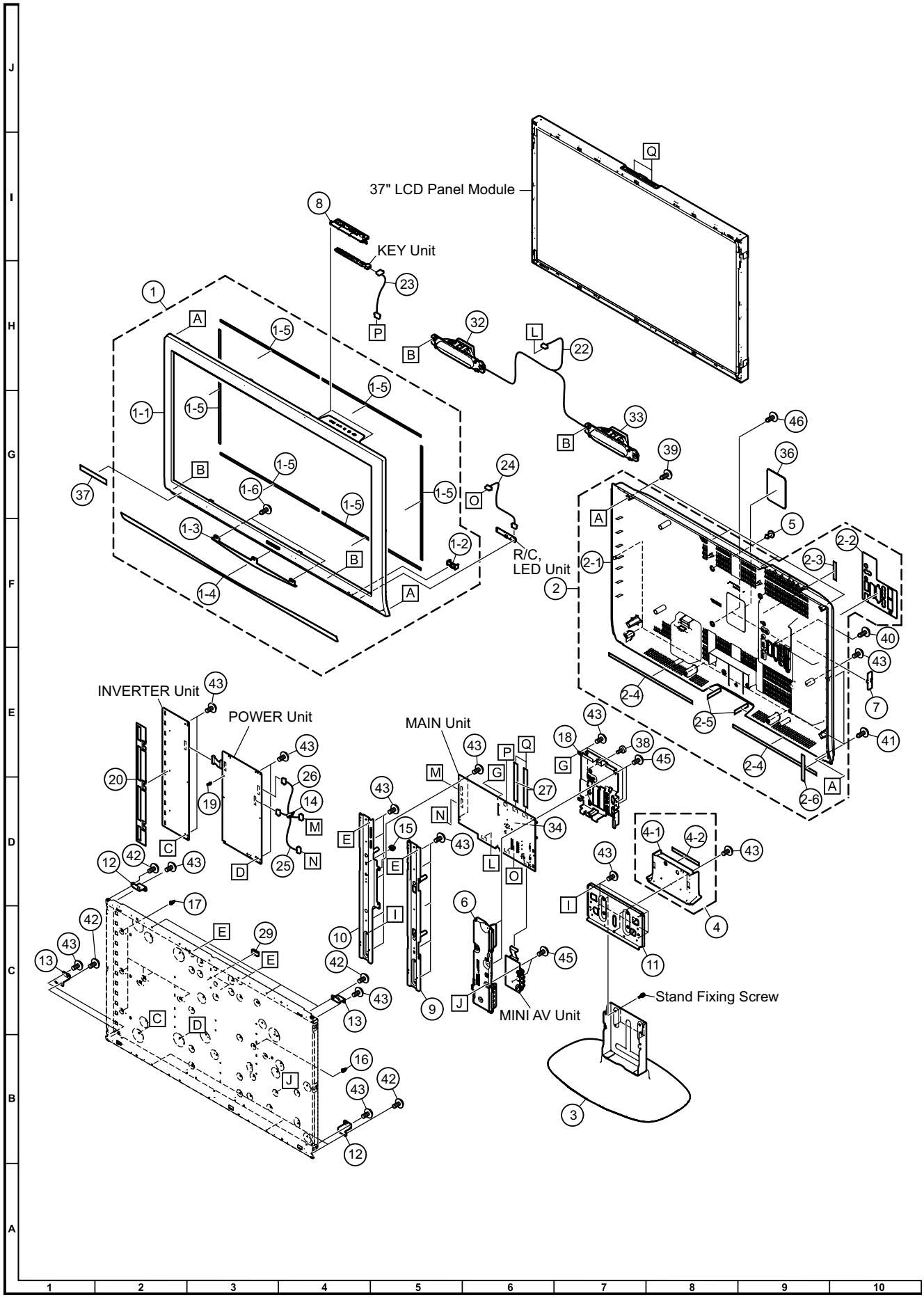
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE449FM03 (MAIN Unit)					
R4202	VRK-SB1FF820JY	AA		J	Resistor 82 1/32W Metal Composition
R4203	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4204	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4205	VRK-SB1FF820JY	AA		J	Resistor 82 1/32W Metal Composition
R4206	VRK-SB1FF820JY	AA		J	Resistor 82 1/32W Metal Composition
R4207	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4208	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4209	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4210	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4211	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4212	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4213	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4214	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4215	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4216	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4217	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4219	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4220	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4231	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R4240	VRS-CZ1JF102FY	AA		J	Resistor 1k 1/16W Metal Oxide
R4241	VRS-CZ1JF102FY	AA		J	Resistor 1k 1/16W Metal Oxide
R4242	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R4243	VRS-CZ1JF102FY	AA		J	Resistor 1k 1/16W Metal Oxide
R4244	VRS-CZ1JF102FY	AA		J	Resistor 1k 1/16W Metal Oxide
R4251	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4252	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4253	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4254	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4255	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4256	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4257	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4258	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4259	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4260	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4261	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4262	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4263	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R4264	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4268	VRK-SA1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Composition
R4269	VRK-SA1JF220JY	AA		J	Resistor 22 1/16W Metal Composition
R4272	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4401	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4402	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4403	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4404	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4405	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4406	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R4407	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4408	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4409	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4410	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4411	VRS-CG1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R4412	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4413	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4414	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4415	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4416	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4417	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4418	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4419	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4420	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4421	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4422	VRS-CG1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R4423	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4424	VRK-SA1JF103JY	AB		J	Resistor 10k 1/16W Metal Composition
R4425	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4426	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4427	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4428	VRS-CG1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R4429	VRS-CG1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4430	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4431	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4432	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4433	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4434	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4435	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4436	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4437	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4441	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4443	VRS-CZ1JF333JY	AA		J	Resistor 33k 1/16W Metal Oxide
R4445	VRS-CZ1JF333JY	AA		J	Resistor 33k 1/16W Metal Oxide
R4446	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4447	VRS-CZ1JF223JY	AA		J	Resistor 22k 1/16W Metal Oxide
R4448	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4452	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE449FM03 (MAIN Unit)					
R4453	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R4454	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4455	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4458	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4561	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8102	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R8104	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R8114	VRS-CG1JF220JY	AB		J	Resistor 22 1/16W Metal Oxide
R8115	VRS-CY1JF105FY	AA		J	Resistor 1M 1/16W Metal Oxide
R8118	VRS-CG1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R8121	VRS-CY1JF331FY	AA		J	Resistor 330 1/16W Metal Oxide
R8129	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R8130	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R8131	VRS-CZ1JF471JY	AA		J	Resistor 470 1/16W Metal Oxide
R8132	VRS-CZ1JF471JY	AA		J	Resistor 470 1/16W Metal Oxide
R8133	VRS-CZ1JF471JY	AA		J	Resistor 470 1/16W Metal Oxide
R8134	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R8135	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R8136	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R8137	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R8141	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R8142	VRS-CZ1JF101FY	AA		J	Resistor 100 1/16W Metal Oxide
R8143	VRS-CZ1JF101FY	AA		J	Resistor 100 1/16W Metal Oxide
R8145	VRS-CZ1JF101FY	AA		J	Resistor 100 1/16W Metal Oxide
R8146	VRS-CZ1JF101FY	AA		J	Resistor 100 1/16W Metal Oxide
R8147	VRS-CZ1JF101FY	AA		J	Resistor 100 1/16W Metal Oxide
R8148	VRS-CG1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R8149	VRS-CZ1JF101FY	AA		J	Resistor 100 1/16W Metal Oxide
R8202	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R8203	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R8204	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8208	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8209	VRK-SA1JF220JY	AA		J	Resistor 22 1/16W Metal Composition
R8210	VRS-CZ1JF752FY	AA		J	Resistor 7.5k 1/16W Metal Oxide
R8212	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8213	VRS-CZ1JF243FY	AA		J	Resistor 24k 1/16W Metal Oxide
R8215	VRS-CZ1JF243FY	AA		J	Resistor 24k 1/16W Metal Oxide
R8217	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R8219	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8221	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8226	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8228	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8233	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8234	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R8402	VRS-CZ1JF202FY	AA		J	Resistor 2k 1/16W Metal Oxide
R8403	VRS-CZ1JF332FY	AA		J	Resistor 3.3k 1/16W Metal Oxide
R8404	VRS-CZ1JF512FY	AA		J	Resistor 5.1k 1/16W Metal Oxide
R8406	VRS-CZ1JF513FY	AA		J	Resistor 51k 1/16W Metal Oxide
R8408	VRS-TW2HPR33JY	AA		J	Resistor 0.33 1/2W Metal Oxide
R8409	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R8410	VRS-CZ1JF153FY	AA		J	Resistor 15k 1/16W Metal Oxide
R8411	VRS-CZ1JF153FY	AA		J	Resistor 15k 1/16W Metal Oxide
R8412	VRS-CZ1JF203FY	AA		J	Resistor 20k 1/16W Metal Oxide
R8413	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R8414	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R8415	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R8416	VRS-CZ1JF332JY	AA		J	Resistor 3.3k 1/16W Metal Oxide
R8417	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R8418	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R8420	VRS-CZ1JF913FY	AA		J	Resistor 91k 1/16W Metal Oxide
R8421	VRS-CZ1JF133FY	AA		J	Resistor 13k 1/16W Metal Oxide
R8423	VRS-CZ1JF332FY	AA		J	Resistor 3.3k 1/16W Metal Oxide
R8427	VRS-CZ1JF683FY	AA		J	Resistor 68k 1/16W Metal Oxide
R8428	VRS-CZ1JF113FY	AA		J	Resistor 11k 1/16W Metal Oxide
R8429	VRS-CZ1JF1R0JY	AA		J	Resistor 1 1/16W Metal Oxide
R8430	VRS-CZ1JF511FY	AA		J	Resistor 510 1/16W Metal Oxide
R8431	VRS-CZ1JF513FY	AA		J	Resistor 51k 1/16W Metal Oxide
R8432	VRS-CZ1JF1R0JY	AA		J	Resistor 1 1/16W Metal Oxide
R8434	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R8435	VRS-CZ1JF102FY	AA		J	Resistor 1k 1/16W Metal Oxide
R8436	VRS-CY1JF562JY	AA		J	Resistor 5.6k 1/16W Metal Oxide
R8437	VRS-CZ1JF391FY	AA		J	Resistor 390 1/16W Metal Oxide
R8438	VRS-CZ1JF203FY	AA		J	Resistor 20k 1/16W Metal Oxide
R8439	VRS-CZ1JF303FY	AA		J	Resistor 30k 1/16W Metal Oxide
R8440	VRS-CZ1JF753FY	AA		J	Resistor 75k 1/16W Metal Oxide
R8441	VRS-CZ1JF242FY	AA		J	Resistor 2.4k 1/16W Metal Oxide
R8442	VRS-CZ1JF204FY	AA		J	Resistor 200k 1/16W Metal Oxide
R8443	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R8444	VRS-CZ1JF183FY	AA		J	Resistor 18k 1/16W Metal Oxide
R8445	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R8446	VRS-CZ1JF102FY	AA		J	Resistor 1k 1/16W Metal Oxide
R8448	VRS-CZ1JF133FY	AA		J	Resistor 13k 1/16W Metal Oxide
R8450	VRS-CZ1JF753FY	AA		J	Resistor 75k 1/16W Metal Oxide
R8451	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R8452	VRS-CZ1JF390FY	AA		J	Resistor 39 1/16W Metal Oxide

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE449FM03 (MAIN Unit)					
R8453	VRS-CZ1JF183FY	AA		J	Resistor 18k 1/16W Metal Oxide
R8454	VRS-CZ1JF334FY	AA		J	Resistor 330k 1/16W Metal Oxide
R8455	VRS-CZ1JF153FY	AA		J	Resistor 15k 1/16W Metal Oxide
R8456	VRS-CZ1JF102FY	AA		J	Resistor 1k 1/16W Metal Oxide
R8457	VRS-TQ2BD511JY	AA		J	Resistor 510 1/8W Metal Oxide
R8458	VRS-TQ2BD511JY	AA		J	Resistor 510 1/8W Metal Oxide
R8459	VRS-CZ1JF513FY	AA		J	Resistor 51k 1/16W Metal Oxide
R8460	VRS-CZ1JF203FY	AA		J	Resistor 20k 1/16W Metal Oxide
R8461	VRS-TQ2BD511JY	AA		J	Resistor 510 1/8W Metal Oxide
R8491	VRS-CZ1JF113FY	AA		J	Resistor 11k 1/16W Metal Oxide
R8492	VRS-CZ1JF102FY	AA		J	Resistor 1k 1/16W Metal Oxide
R8493	VRS-CZ1JF682FY	AA		J	Resistor 6.8k 1/16W Metal Oxide
R8494	VRS-CZ1JF204FY	AA		J	Resistor 200k 1/16W Metal Oxide
R8495	VRS-CZ1JF183FY	AA		J	Resistor 18k 1/16W Metal Oxide
R8496	VRS-CZ1JF683FY	AA		J	Resistor 68k 1/16W Metal Oxide
R8497	VRS-CZ1JF393FY	AA		J	Resistor 39k 1/16W Metal Oxide
R8499	VRS-TV1JD000JY	AA		J	Resistor 0 1/10W Metal Oxide
R8500	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R8502	VRS-CZ1JF102FY	AA		J	Resistor 1k 1/16W Metal Oxide
R8504	VRS-TW2HF3R3JY	AA		J	Resistor 3.3 1/2W Metal Oxide
R8505	VRS-TV1JD3R3JY	AA		J	Resistor 3.3 1/10W Metal Oxide
R8506	VRS-TV1JD101JY	AA		J	Resistor 100 1/10W Metal Oxide
R8507	VRS-CZ1JF105JY	AA		J	Resistor 1M 1/16W Metal Oxide
R8508	VRS-CZ1JF474JY	AA		J	Resistor 470k 1/16W Metal Oxide
SC1101	QSOCZA161WJZZ	AG		J	Socket 21Pin (INPUT 2)
SC1102	QSOCZA161WJZZ	AG		J	Socket 21Pin (INPUT 2)
SC1201	QSOCNA770WJZZ	AG	N	J	Socket 17Pin (PC-IN(BLACK))
SC1501	QSOCNA769WJZZ	AG	N	J	Socket 11Pin (RS232C)
SC1901	QSOCZA171WJZZY	AF		J	Socket 23Pin
SC1921	QSOCZA171WJZZY	AF		J	Socket 23Pin
SC4401	QSOCJA002WJZZQ	AQ	N	J	Socket 68Pin
SC8201	QCNCW2367WJZZY	AG		J	Socket 80Pin
SC8202	QCNCW2367WJZZY	AG		J	Socket 80Pin
TH2301	VHHM1103J03-1Y	AC		J	Thermistor
⚠ TU201	RTUDAA019WJQZ	BC		P	Tuner
X201	RCRSCA039WJZZY	AG		J	Crystal
X1951	RCRSCA146WJZZY	AE		J	Crystal 28.322MHz
X2301	RCRMCA011WJZZY	AD		J	Crystal
X3051	RCRSC0012CEZZY	AH		J	Crystal 20.25MHz
X4001	RCRSCA039WJZZY	AG		J	Crystal
N	NSFTZA243WJFN	AB		J	Shaft, x4 (D-SUB)
N	PRDARA577WJFW	AF	N	J	Heat Sink (VCT-Pro)
N	PSPAZB311WJKZ	AE		J	Spacer (VCT-Pro)
N	XBPSN20P10JS0	AD		J	Screw, x2 (Card Slot)
[4] DUNTKE457FM03 (R/C, LED Unit)					
C102	VCKYTV1CF225ZY	AB		J	Capacitor 2.2 16V Ceramic
C107	VCEASY1CN107MY	AC		J	Capacitor 100 16V Electrolytic
D101	RH-EXA092WJZZY	AB		J	Zener Diode UDZSNPTE-1712B
D103	RH-PX0421CEZZY	AD		J	Photo Diode CL-165HR/YG-D-T
P101	QPLGNA339WJZZY	AD		J	Plug 5pin (RA)
R101	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R108	VRS-CY1JF151JY	AA		J	Resistor 0 1/16W Metal Oxide
R109	VRS-CY1JF821JY	AA		J	Resistor 820 1/16W Metal Oxide
RMC101	RRMCUA053WJZZ	AE		J	Remote Control
SLD101	PSLDPA076WJFW	AD		J	Shield Case
[5] DUNTKE266FM01 (KEY Unit)					
D151	RH-EX0646GEZZY	AA		J	Zener Diode MTZJT-7215B
D152	RH-EX0646GEZZY	AA		J	Zener Diode MTZJT-7215B
D155	RH-EX0646GEZZY	AA		J	Zener Diode MTZJT-7215B
P151	QPLGNA059WJZZ	AC		J	Plug 5Pin(KM)
R151	VRD-RA2BE822JY	AA		J	Resistor 8.2k 1/8W Carbon
R152	VRD-RA2BE123JY	AA		J	Resistor 12k 1/8W Carbon
R153	VRD-RA2BE822JY	AA		J	Resistor 8.2k 1/8W Carbon
R154	VRD-RA2BE123JY	AA		J	Resistor 12k 1/8W Carbon
S151	QSW-K0003AJZZ+	AB		J	Switch CH UP
S152	QSW-K0003AJZZ+	AB		J	Switch CH DOWN
S153	QSW-K0003AJZZ+	AB		J	Switch CH INPUT
S154	QSW-K0003AJZZ+	AB		J	Switch VOL UP
S155	QSW-K0003AJZZ+	AB		J	Switch VOL DOWN
S156	QSW-K0003AJZZ+	AB		J	Switch CH MENU
S157	QSW-K0003AJZZ+	AB		J	Switch CH POWER

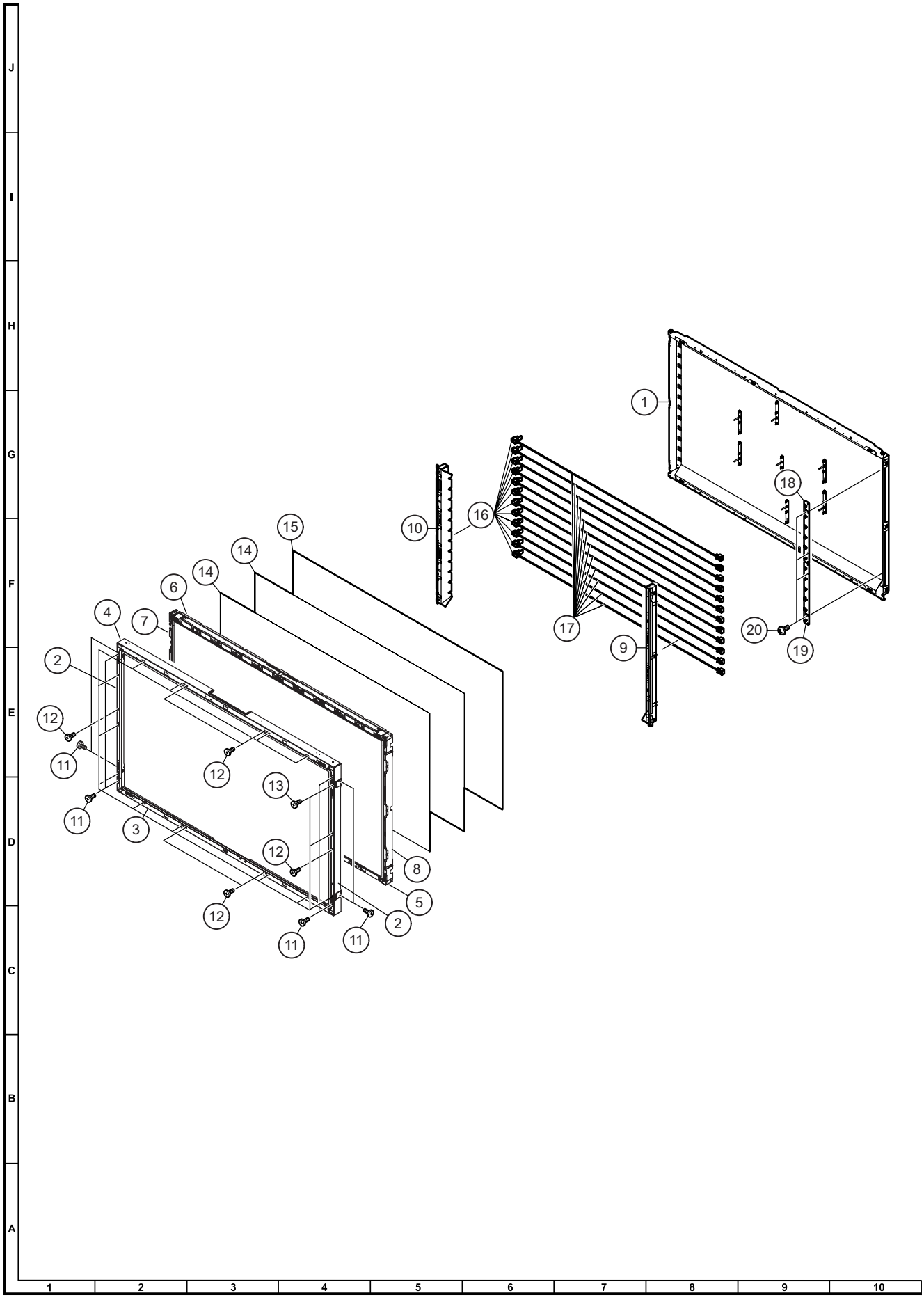
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[6] DUNTKE491FM01 (MINI-AV Unit)					
C1001	VCKYCY1HB102KY	AA		J	Capacitor 1000p 50V Ceramic
C1002	VCKYCY1HB102KY	AA		J	Capacitor 1000p 50V Ceramic
C1003	VCKYCY1HB223KY	AA		J	Capacitor 0.022 50V Ceramic
C1004	VCKYCY1HB223KY	AA		J	Capacitor 0.022 50V Ceramic
C1020	VCKYCY1HB102KY	AA		J	Capacitor 1000p 50V Ceramic
C1046	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C1047	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C1049	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
D1001	RH-EXA541WJZZY	AB		J	Zener Diode EXA541WJ
D1002	RH-EXA541WJZZY	AB		J	Zener Diode EXA541WJ
D1005	RH-EXA541WJZZY	AB		J	Zener Diode EXA541WJ
FB1001	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1002	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FL1001	RFiLN0080CEZZY	AD		J	Filter FILN0080CE
FL1002	RFiLN0080CEZZY	AD		J	Filter FILN0080CE
FL1003	RFiLN0080CEZZY	AD		J	Filter FILN0080CE
J1001	QSOCD0456CEZZ	AE		J	Socket
J1002	QJAKGA079WJZZ	AD		J	Jack
J1003	QJAKJ0047CEZZ	AD		J	Jack
LUG1001	QLUGHA002WJZZ	AB		J	Lug
LUG1002	QLUGHA002WJZZ	AB		J	Lug
R1001	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1002	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1003	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1004	VRS-TQ2EF101JY	AA		J	Resistor 100 1/4W Metal Oxide
R1005	VRS-TQ2EF101JY	AA		J	Resistor 100 1/4W Metal Oxide
R1007	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1008	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1009	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R1024	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1025	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1041	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1042	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
SC1001	QSOCZ1538CEZZ	AE		J	Socket

[7] CABINET PARTS



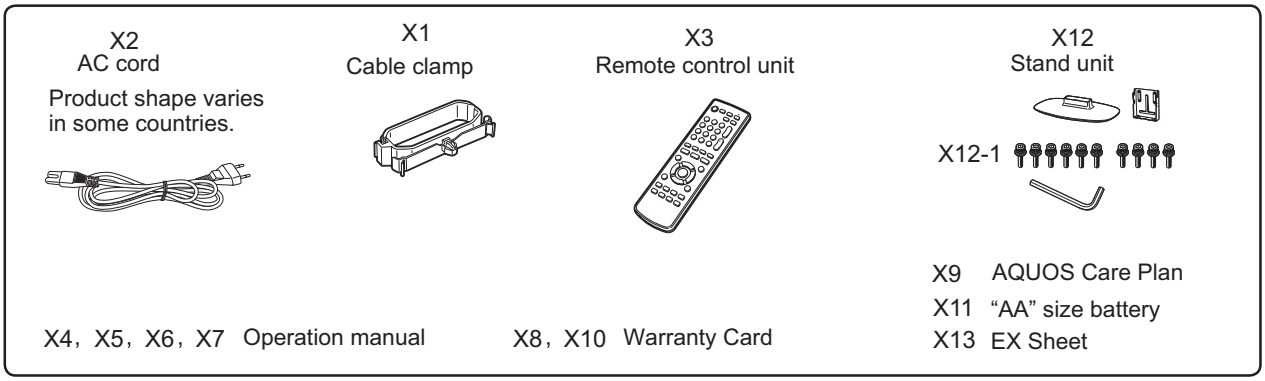
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[7] CABINET PARTS					
1	CCABAB986WJ02	BM	N	P	Front Cabinet Ass'y (LC-37D44E/S/RU-BK)
1	CCABAB986WJ03	BP	N	P	Front Cabinet Ass'y (LC-37D44E/S/RU-GY)
1-1	Not Available	−	N	−	Front Cabinet
1-2	Not Available	−	N	−	LED Cover
1-3	Not Available	−	N	−	Center Dec. (LC-37D44E/S/RU-BK)
1-3	Not Available	−	N	−	Center Dec. (LC-37D44E/S/RU-GY)
1-4	Not Available	−	N	−	Speaker Sheet (LC-37D44E/S/RU-BK)
1-4	Not Available	−	N	−	Speaker Sheet (LC-37D44E/S/RU-GY)
1-5	Not Available	−	N	−	Mask Himelon, x6
1-6	XEBS930P08000	AA		J	Screw, x2 (Center Dec.)
2	CCABBB243WJ02	BE	N	P	Rear Cabinet Ass'y
2-1	Not Available	−	N	−	Rear Cabinet
2-2	Not Available	−		−	Terminal Label
2-3	Not Available	−		−	Himelon (t=0.5)
2-4	Not Available	−	N	−	Himelon (t=0.7), x2
2-5	Not Available	−	N	−	Himelon (Bottom), x2
2-6	Not Available	−	N	−	Himelon (Side)
3	CDAi−A443WJ02	BH	N	P	Stand Ass'y (LC-37D44E/S/RU-BK)
3	CDAi−A443WJ05	BL	N	P	Stand Ass'y (LC-37D44E/S/RU-GY)
4	CCOVAC612WJ03	AK	N	P	Bottom Cover Ass'y
4-1	Not Available	−		−	Bottom Cover
4-2	Not Available	−	N	−	Himelon (t=0.7)
5	GCOVAC576WJKZ	AC	N	J	VESA Cap, x2
6	GCOVAC614WJ1A	AL		P	MINI AV Cover
7	GCOVAC637WJ1A	AD		P	PC Card Cover
8	JBTN−A718WJ1A	AE		P	Control Button
9	LANGKB354WJFW	AU	N	P	Center Angle (R)
10	LANGKB355WJFW	AV	N	P	Center Angle (L)
11	LANGKB358WJFW	AS	N	P	Stand Angle
12	LANGKB385WJFW	AC	N	P	LCD Angle A, x2
13	LANGKB386WJFW	AC	N	P	LCD Angle B, x2
14	LHLDW1033CE00	AA		J	Wire Holder
15	LHLDWA143WJKZ	AC		J	Wire Holder
16	LHLDZA933WJKZ	AB		J	MAIN PWB Holder
17	LHLDZA934WJKZ	AB		J	POWER/INVERTER PWB Holder, x6
18	PSLDMB374WJFW	AK		P	Main Shield
19	PSPAZB202WJKZ	AB		J	Spacer
20	PZETKA394WJKZ	AH	N	P	Barrier Sheet
22	QCNW−G667WJQZ	AH	N	P	Connecting Cord (SP)
23	QCNW−G669WJQZ	AF	N	P	Connecting Cord (KM)
24	QCNW−G671WJQZ	AF	N	P	Connecting Cord (RA)
25	QCNW−G673WJQZ	AK	N	P	Connecting Cord (PD)
26	QCNW−G675WJQZ	AG	N	P	Connecting Cord (LB)
27	QCNW−H026WJQZ	AN		J	LCD FFC, x2
29	RCORFA064WJZZ	AF		P	Core (LCD FFC), x2
32	RSP−ZA375WJZZ	AT	N	P	Speaker (L)
33	RSP−ZA376WJZZ	AT	N	P	Speaker (R)
⚠ 34	RTUDAA019WJQZ	BC		P	Tuner
36	TLABNC117WJZZ	AB		P	Model Label
37	TLABZB748WJZZ	AF		P	POP Label (LC-37D44E/K-BK/GY)
37	TLABZB749WJZZ	AN		P	POP Label (LC-37D44RU-BK/GY)
38	XBBS730P04000	AA		J	Screw (Tuner)
39	XBPS740P10JS0	AB		J	Screw, x4 (CAB-B)
40	XEBS930P08000	AA		J	Screw, x2 (Terminal)
41	XEBS940P16000	AB		J	Screw, x6 (CAB-B)
42	XEBSN40P10000	AB		J	Screw, x8 (CAB-A/LCD-PANEL)
43	XHPS730P06WS0	AA	N	J	Screw, x31 (PWB ETC30/CAB-B1)
45	XHPS730P16WS0	AB		J	Screw, x4 (MAIN ETC)
46	LX−BZA170WJF9			S	Screw, x2 (VESA BOSS)

[8] LCD MODULE ASSEMBLY



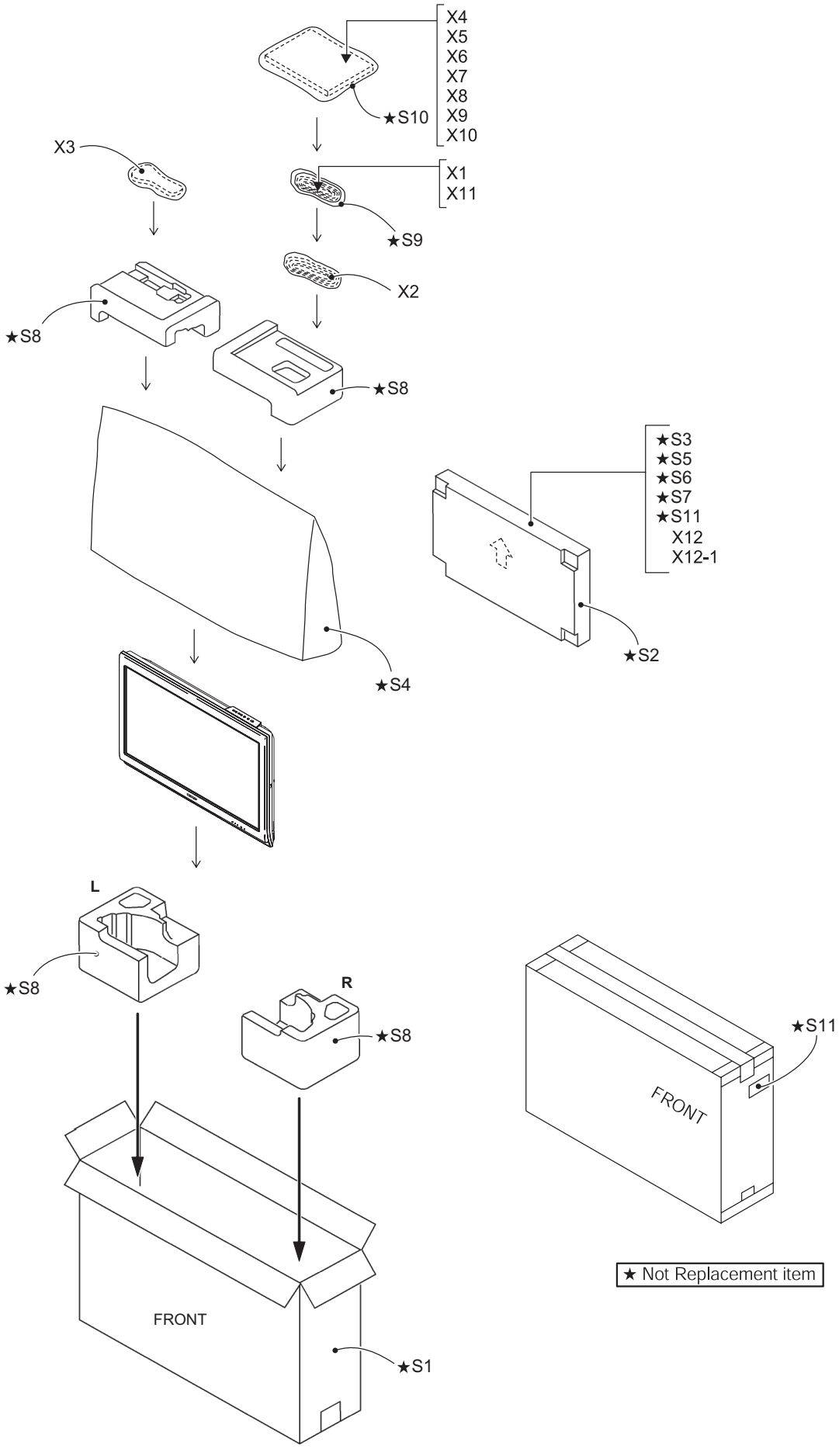
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[8] LCD MODULE ASSEMBLY					
1	CCHSMA423WJ01	BP		J	Back Light Chassis Ass'y
2	CANGK4052TP01	AL		J	Bezel Ass'y, x2 (Left/Right)
3	CANGKB426WJ01	AZ		J	Bezel Ass'y (Bottom)
4	CANGKB426WJ02	BA		J	Bezel Ass'y (Top)
5	CHLDZA926WJ01	AP		J	Panel Chassis Ass'y (Bottom)
6	CHLDZA927WJ01	AP		J	Panel Chassis Ass'y (Top)
7	CHLDZA980WJ01	AL		J	Panel Chassis Ass'y (Left)
8	CHLDZA981WJ01	AL		J	Panel Chassis Ass'y (Right)
9	LHLDZA920WJKZ	AN		J	Lamp Holder (R)
10	LHLDZA921WJKZ	AL		J	Lamp Holder (L)
11	LX-BZ2312TPZZ	AB		J	Screw, x8 (M3*3.2 Bezel)
12	LX-EZA028WJF9	AB		J	Screw, x6 (M3*6 Panel Chassis)
13	LX-HZA042WJF8	AB		J	Screw, x12 (LCD Panel)
14	PSHEPA585WJZZ	AT		J	Diffusion Sheet, x2
15	PSLDK3004TPZZ	AY		J	Diffusion Plate
16	QSOCFA003WJZZ	AD		J	Lamp Socket, x12
17	RLMP-0664TPZZ	AQ		J	Lamp Unit, x12
18	RUNTK3925TPZZ	AP		J	GND-PWB
19	RUNTK3926TPZZ	AP		J	GND-PWB
20	XHPS730P08KS0	AB		J	Screw, x4 (GND PWB)

[9] SUPPLIED ACCESSORIES



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[9] SUPPLIED ACCESSORIES					
X1	LHLDWA173WJKZ	AE		J	Cable Clamp
⚠ X2	QACCKA004WJPZ	AM		J	AC Cord 2Pin (for Europe without U.K. and Ireland.)
⚠ X2	QACCBA054WJPZ	AQ		P	AC Cord 3Pin (for U.K. and Ireland)
X3	RRMCGA591WJSA	AN		S	Remote Control unit (LC-37D44E/S/RU-BK)
X3	RRMCGA591WJSB	AN		S	Remote Control unit (LC-37D44E/S/RU-GY)
X4	TINS-D792WJZZ	AM	N	P	Operation Manual (ENGLISH...) (LC-37D44E/K/S)
X5	TINS-D793WJZZ	AN	N	P	Operation Manual (SWEDISH...) (LC-37D44S)
X6	TINS-D794WJZZ	AP	N	P	Operation Manual (POLISH...) (LC-37D44E)
X7	TINS-D795WJZZ	AE	N	P	Operation Manual (RUSSIAN) (LC-37D44RU)
X8	TGAN-A801WJZZ	AB		P	Warranty Card (U.K and Ireland)
X9	TGAN-A802WJZZ	AC		P	AQUOS Care Plan (U.K and Ireland)
X10	TGAN-A077WJZZ	AE		J	Warranty Card (Russian)
X11	Not Available	-		-	"AA" Size Battery
X12	CDAi-A443WJ02	BH	N	P	Stand Ass'y (LC-37D44E/S/RU-BK)
X12	CDAi-A443WJ05	BL	N	P	Stand Ass'y (LC-37D44E/S/RU-GY)
X12-1	Not Available	-	N	-	Tool for Stand
X13	TCAUZA355WJZZ	AB	N	P	EX Sheet

[10] PACKING PARTS



★ Not Replacement item

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[10] PACKING PARTS					
S1	SPAKCD954WJZZ	–	N	–	Packing Case
S2	SPAKFB419WJZZ	–	N	–	Stand Case
S3	SPAKFB420WJZZ	–	N	–	Stand Pad (LC-37D44E/S/RU-BK)
S3	SPAKFB553WJZZ	–	N	–	Stand Pad (LC-37D44E/S/RU-GY)
S4	SPAKPA338WJZZ	–		–	Wrapping Paper
S5	SPAKPA684WJZZ	–	N	–	Mirror Mat (Stand Base)
S6	SPAKPB068WJZZ	–	N	–	Mirror Mat (Stand Support)
S7	SPAKAA374WJZZ	–	N	–	Cover Sheet
S8	SPAKXB807WJZZ	–	N	–	Buffer Material (Top/Bottom)
S9	SSAKAA009WJZZ	–		–	Polyethylene bag
S10	SSAKAA111WJZZ	–		–	Polyethylene bag
S11	TLABM5584BMZZ	–		–	Case No. Label
[11] SERVICE JIGS					
N	QCNW-G440WJQZ	AP	N	J	Connecting Cord (4-5pins L=1000mm), Main to Key
N	QCNW-H184WJQZ	AX	N	J	Connecting Cord, MAIN-R/C,LED
N	QCNW-H185WJQZ	AV	N	J	Connecting Cord, MAIN-POWER
N	QCNW-H186WJQZ	AQ	N	J	Connecting Cord, MAIN-POWER
N	QCNW-H187WJQZ	AP	N	J	Connecting Cord, MAIN-SPEAKER
N	QCNW-C222WJQZ	AW		J	Connecting Cord (80pin FFC L=1000mm), x2 MAIN to LCD Panel Unit

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